Environment Canada

1990
CATALOGUE OF ENVIRONMENTAL DATA IN ATLANTIC CANADA

BY
C. J. SPENCER

Environmental Quality Division
Environmental Protection
Conservation & Protection
Environment Canada
Atlantic Region
March 1991

Canada

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1990
UPDATE
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ABSTRACT

The catalogue was assembled as an aid to individuals and organizations evaluating, monitoring or reporting on the environmental resources of Atlantic Canada. Through a process of consultation with data holders profiles of each discrete source were prepared according to a standard format. The 1990 catalogue contains 112, one page profile sheets, each providing details such as location, type of data, data format and method of retrieval. The profiles are issued for storage in a three ring binder in order to allow easy addition of new, revised or updated profiles. Recipients which express an interest will receive new material on a regular basis.

RÉSUMÉ

Le catalogue a été assemblé pour venir en aide aux individus et aux organisations impliqués dans l'étude des ressources environmentales du Canada Atlantique. Suite à un processus de consultation, un profil a été préparé pour chacune des sources de données en utilisant un format standard. Le catalogue pour 1990 contient 112 profils d'une page chacun contenant en autre de l'information sur l'emplacement, le type de données, le format ainsi que la méthode d'extraction. Les profils sont distribués dans un cahier à trois anneaux afin de rendre l'addition ou la revision de profils plus facile. Les personnes indiquant un intéret recevront régulièrement du matériel supplémentaire.

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1.0 INTRODUCTION

With the release of the 1985 National State of the Environment Report and the 1979 and 1985 Atlantic Canada Environmental Quality Reports, the importance of "state of the environment reporting" (SOE) was firmly established. Reader response to these documents has been very encouraging, so much so that production is now underway of a third Atlantic Report to be published in 1991. At the heart of such reporting is the analysis and interpretation of environmental data. Often, however, such information is not well publicized and therefore difficult to locate. In Atlantic Canada our experience has shown that data acquisition is a major problem in the preparation of the environmental quality reports. A similar difficulty was acknowledged at the national level.

This led us to conclude that an up-to-date catalogue of existing environmental data would be a great benefit. The main goals of such an inventory would be to identify the data holder, location, type of data, data format and method of retrieval. We believe that such an inventory would be beneficial not only to those charged with the responsibility for SOE reporting but to others such as those involved in environmental assessment, research, and municipal planning activities. To meet this need the Environmental Protection Atlantic Region Office of Environment Canada developed and carried out a comprehensive survey to locate data holders and to produce a catalogue of pertinent information on each data source.

2.0 SURVEY METHODOLOGY

To begin the survey, a questionnaire was designed for the purpose of identifying specific environmental data pertinent to issues within Atlantic Canada. This approach ensured consistency and expedited the search process. Initially copies of the questionnaires were distributed in-house and to other government departments along with a request for respondents to identify other potential holders of environmental information. This resulted in the identification of many new sources of information both inside and outside of government. All data base holders identified by this process were contacted by phone and, where applicable, questionnaires were completed at that time; otherwise blank questionnaires with appropriate instructions were forwarded to data holders for completion and returned by mail.

A profile was completed for each data source and a copy was returned to the originator for verification of information and authorization to publish. The entire inventory was screened to ensure that each data base generally satisfied three criteria:

1) the information pertained to the natural environment;
2) all information was accessible;
3) the information system was still operational.

Data base information identified, but which did not meet these criteria, is listed in the appendix. Profiles of these are available upon request.

3.0 DISCUSSION

This survey is intended to be as comprehensive as possible. However, as the identification of sources relied primarily upon "word of mouth", it is likely that some have been overlooked. If you know of any, please inform the author in order that profiles can be prepared and circulated to holders of the current catalogue.

Material in this catalogue will be reviewed and updated on a regular basis. Revised or new profiles can be mailed to inventory holders as they become available. If you wish to receive these please advise the author. Any suggestions for improving the inventory would also be appreciated. The author may be contacted directly by phoning (902) 426-7123 or by writing to the following address:

C.J. Spencer
Environmental Quality Division
Environmental Protection
Conservation and Protection, Environment Canada
45 Alderney Drive
Dartmouth, Nova Scotia
B2Y 2N6

4.0 ACKNOWLEDGEMENTS

The author wishes to extend a sincere thanks to those who contributed to this report.

Special thanks is extended to Mrs. Joan Keating for typing assistance and to Mr. Tim Palmeter for his contribution and suggestions for the 1990 update.

DATA TYPE INDEX (Updated 1991)

In some circumstances data from one or two environmental disciplines may be all that is needed. This index will speed the selection process. The numbers referred to are found in the upper right, or left hand of each profile sheet, as well as in the first column of the subject index.

Physical Data:

1, 2, 3, 4, 5, 6, 9, 12, 13, 14, 15, 18, 19, 21, 23, 24, 25, 26, 27, 28, 29, 33, 34, 35, 36, 38, 39, 41, 46, 51, 55, 56, 59, 64, 69, 71, 72, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 87, 88, 92, 93, 95, 96, 99, 101, 102, 103, 108

Chemical Data:

4, 5, 7, 9, 12, 13, 14, 22, 23, 24, 25, 26, 28, 32, 33, 34, 37, 38, 40, 46, 47, 51, 53, 54, 55, 59, 60, 64, 69, 70, 73, 74, 78, 79, 80, 83, 85, 87, 88, 89, 90, 91, 92, 94, 95, 97, 99, 100, 101, 104, 105, 106, 112

Biological Data:

2, 3, 6, 8, 10, 11, 12, 14, 16, 17, 19, 20, 23, 24, 25, 26, 28, 29, 30, 31, 33, 38, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 52, 53, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 75, 79, 80, 85, 86, 92, 93, 95, 97, 98, 102, 107, 108, 109, 110, 111, 112

SUBJECT INDEX

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2	Environmental Information System (CLDS – includes CLUMP, CLI, TBACFLM)
3	Ecological Land Survey (ELS)
4	Water Quality Data Base
5	Air Quality Information
6	Nova Scotia Peatlands Inventory
7	Water Quality Data Base
8	Distribution of Whales and Seals
9	Geotechnical Borehole Data
10	PIROP I (Shipboard Surveys)
11	PIROP II (Aerial Surveys)
12	Atlantic Canada Water Quality Monitoring Program for Mussel Growers
13	NATCHEM (National Atmospheric Chemistry Data Base)
14	Marine Monitoring Data
15	HYDAT (National Hydrometric Data Bank)
16	Creel Censuses – National Parks
17	Fish Health Data Base – Maritime Provinces

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18	Minerals (Aggregate) Data Base
19	Forest Bird Habitat Requirements – Bird Abundance Association
20	Wild Fur Harvesting Data
21	Snow Survey Data Base
22	NAQNSWELL/NAQUADAT
23	Natural History – New Brunswick
24	Park Environment Resource Description and Analysis
25	Habitat Alteration Referral System Data Base
26	Aquaculture Lease Information
27	Coastal Information System
28	ATLMON (Atlantic Monitoring Data)
29	Groundfish Surveys Research Data Base
30	Game Harvesting Data
31	Fish Populations at Fishways
32	Water Quality Information
33	Natural Areas – Prince Edward Island
34	Compilation of Information on Surficial Mineral Resources off Eastern Canada
35	SID (Sample Information Data Base)
36	SAD (Sample Analysis Data Base)
37	Watershed Biogeochemistry
38	Halifax Urban Watersheds Water Quality
39	Flood Risk Map
40	Surface Water Quality Reference System
41	Natural History Collection Files
42	Coastal Waterfowl Survey
43	Colonial Birds in the Maritimes – Atlantic Canada
44	Piping Plover Nesting Sites
45	Shellfish Lease Inventory
46	Nutrient and Biological Productivity in Atlantic Region Waters
47	Toxic Chemicals Data Base
48	Distribution of Threatened and Endangered Species
49	Sable Island Horse Survey
50	Canadian Forest Resource Data System
51	Contaminants in Harbour Sediments
52	Maritime Breeding Bird Atlas
53	Shellfish
54	Contaminant Borders and Transfer from Mother to Young in Whales and Seals
55	Environmental Chemistry Data Base
56	Heathland Classification of Newfoundland
57	Succession on Disturbed Forest Land
58	Fish and Wildlife Surveys Within National Parks
59	Experimental Ecology Data (EXPEC)
60	Freshwater and Anadromous Data (FAFP)
61	Foreign Cooperative Research (FCR)

SUBJECT INDEX

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62	Groundfish Data (GFISH)
63	Invertebrate Data (INVRT)
64	Oceanography Data (OCEAN)
65	Pelagic Data (PELAG)
66	National Harvest Surveys
67	Breeding Bird Survey
68	Bird Banding and Recovery Data Base
69	FMG Atlas and Geographic Information System
70	Acid Rain (Wet Deposition and Aerosol Sulphate Monitoring Network)
71	Geotechnical Data Base
72	Groundwater Monitoring Network – Nova Scotia
73	Air Quality Telemetry
74	Environmental Contaminants in Seabirds
75	Impacts of Pesticides on Songbirds
76	Groundwater Levels
77	Well Driller Reports
78	NAQUADAT (National Water Quality Data Base)
79	International Waters
80	Forest Insect and Disease Survey Infobase
81	Climatological and Hydrometric Data
82	Marine Climatological Data
83	Data Holdings – Marine Chemistry Division, DFO
84	Aquaculture Zoning System
85	Maritime Wetlands Inventory
86	Maritimes Nest Records Scheme
87	Oceanbase
88	ODUMP (Ocean Dumping Data Base)
89	National Registry of Toxic Chemical Residues
90	Lake Chemistry Data Base
91	Rain Chemistry Data Base
92	LRTAP
93	Ducks Unlimited Project Information
94	Water Quality
95	Environmental Monitoring of Salmonid Aquaculture in the West Isles Region, Bay of Fundy
96	Marine Environmental Data Service (MEDS)
97	Chemical and Bacteriological Analysis of Municipal Water Supplies – Nova Scotia
98	Commercial Samples Data Base
99	Stream Alteration Data Base
100	NAPS (National Air Pollution Surveillance Network)
101	CAPMoN (Canadian Air & Precipitation Monitoring Network)

SUBJECT INDEX

Ref. NO.	TITLE
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103	National Archive (Climate)
104	BAPMoN (Background Air Pollution Monitoring Network)
105	Residual Discharge Inventory System (RDIS)
106	Compendium (Comp)
107	Migratory Game Bird Population Status Data Base
108	North American Sugar Maple Decline Project
109	Nova Scotia Forest Inventory
110	New Brunswick Forest Inventory
111	Prince Edward Island Forest Inventory
112	Prince Edward Island Permanent Forest Sample Plot

TITLE
Digital Archives of Canadian Climatological Data

CONTACT
Frank Amirault, Environment Canada, Atmospheric Environment Service, 5th Floor, Bedford Tower, 1496 Bedford Highway, Bedford, N.S., B4A 1E5, (902) 426-9226

PURPOSE
To provide an inventory of Canadian climatological data

ACCESS/FEES/RESTRICTIONS
Through contact person/a fee may be charged/None

COVERAGE
Atlantic Provinces — weather stations (land based) throughout the region

PERIOD OF RECORD/UPDATE FREQUENCY
1953 to present/Continuous

FORMAT
Digital — main frame computer

DATA TYPE/PARAMETERS MEASURED
Physical/hourly weather, rainfall, temperature, sunshine, solar radiation, soil temperature, pan evaporation, wind speed and direction

SAMPLING PROCEDURES
Automatic and manual weather observations

PROGRAM TYPE
Monitoring

COMMENTS
Most of the data is accumulated through manual observations, although more is being automated with time.

TITLE

Environmental Information Systems, formerly Canada Land Data System (CLDS – includes CLUMP, CLI and TBACFLM)

1) *Census Boundaries 1971 and 1976*
2) *Shoreline/Hydrography*
3) *Watersheds*
4) *Land Use Monitoring (CLUMP urban centred regions and ?*
5) *Canada Land Inventory*

CONTACT

Dave Wilson, Environment Canada, Inland Waters, Dartmouth, N.S., B2Y 2N6, (902) 426-4197

PURPOSE

To provide baseline land use data for land use planning

ACCESS/FEES/RESTRICTIONS

Through contact person/A fee may be charged to cover on-line costs/No restrictions

COVERAGE

Canada

PERIOD OF RECORD/UPDATE FREQUENCY

1960 to present/Variable, according to location and data set

FORMAT

Hard copy and digital

DATA TYPE/PARAMETERS MEASURED

Physical/land use changes, water resources, soil quality, moisture levels, land capability for agriculture,
Biological/forestry, ungulates, waterfowl, freshwaters for sport fish and recreation

SAMPLING PROCEDURES

Air photos, satellite images of surveys, statistical reports, hydrometric stations

PROGRAM TYPE

Survey

COMMENTS

- *This is a compendium of several data bases on land use, watersheds and urban sprawl.*
- *Information mapped at 1:50,000 scale.*
- *Main users of information are the public, researchers and industry.*
- *Data can be downloaded to PC format microcomputers.*
- *CLDS contains the following data bases:*
  1) *Canada Land Inventory (CLI) – historical information (1960) on land use and land capability. The CLI includes drainage basin information and administrative boundaries.*
  2) *Canada Land Use Monitoring Program (CLUMP) – land use changes in and around urban areas and prime resource areas such as the Tantramar Marsh and the Atlantic Region. The data originates from air photo interpretation and is updated to 1986.*
  3) *Federal Lands (TBACFLM) – land use information for lands owned by the Federal Government. This is an up-to-date inventory which began in 1980.*

TITLE
Ecological Land Survey (ELS)
1) *Ecological Land Classification*
2) *Ecoclimatic Regions of Canada*
3) *Land Activity for Canada (based on ecologic boundaries)*
4) *Land Cover for Canada*
5) *Parks Canada – ecological land classification*
6) *National overview of Acid Precipitation Impinged Lands (in Canada)*

CONTACT
Dave Wilson, Environment Canada, Inland Waters, Dartmouth, N.S., B2Y 2N6, (902) 426-4197

PURPOSE
Data to facilitate environmental assessments and resource management decisions

ACCESS/FEES/RESTRICTIONS
Through contact person/A nominal fee may be charged/None

COVERAGE
Canada

PERIOD OF RECORD/UPDATE FREQUENCY
1975 to present/Variable; added to as opposed to fixed updated period

FORMAT
Hard copy and digital

DATA TYPE/PARAMETERS MEASURED
Physical/geology, geomorphology
Biological/plant and wildlife distributions (partial)

SAMPLING PROCEDURES
Saltellite imagery, air photo interpretation and ground truthing

PROGRAM TYPE
Survey

COMMENTS
Confidence in data is good.
Data is presented in varying levels of detail.
Data is received from several sources outside of CWS including the Canadian Parks Service and the Government of Newfoundland and Labrador.
Downloadig to PC format microcomputer systems possible.

TITLE
Water Quality Data Base

CONTACT
Bill Ayers, N.B. Department of Environment, P.O. Box 6000, Fredericton, N.B., E3B 5H1, (506) 453-2669

PURPOSE
To monitor baseline trends and determine assimilative capacity

ACCESS/FEES/RESTRICTIONS
Through contact person/Variable, depending on size of the request/No restrictions

COVERAGE
New Brunswick – freshwater areas

PERIOD OF RECORD/UPDATE FREQUENCY
1973 to present/Continuous

FORMAT
Digital – NAQUADAT format on University of New Brunswick's mainframe computer recent data being stored on DBase III

DATA TYPE/PARAMETERS MEASURED
Physical/
Chemical/standard water quality parameters including metals, major ions, organic contaminants, nutrients

SAMPLING PROCEDURES
Standard field procedures – those used by Inland Waters Directorate, Environment Canada

PROGRAM TYPE
Monitoring

COMMENTS

TITLE
Air Quality Information

CONTACT
Bill Ayers, N.B. Department of Environment, P.O. Box 6000, Fredericton, N.B., E3B 5H1, (506) 453-2669

PURPOSE
Baseline data to facilitate environmental impact assessments, trend analysis and assimilative capacity

ACCESS/FEES/RESTRICTIONS
Through contact person/Variable, depending on size of the request/Some information is proprietary

COVERAGE
New Brunswick

PERIOD OF RECORD/UPDATE FREQUENCY
1986 to present/Continuous

FORMAT
Digital – IBM PC, D Base III Plus

DATA TYPE/PARAMETERS MEASURED
Physical/precipitation amount and type
Chemical/all major wet precipitation parameters including nitrates, sulphates, calcium, potassium, magnesium, pH, alkalinity

SAMPLING PROCEDURES
Automatic collectors, standard rain guages

PROGRAM TYPE
Monitoring

COMMENTS
Part of CAPMoN network

TITLE
Nova Scotia Peatlands Inventory

CONTACT
E. Bain or W. Broughm, Department of Mines and Energy, Box 1087, Halifax, N.S., B3J 2X1, (902) 424-5364, (902) 424-7680

PURPOSE
To determine peat resources in Nova Scotia

ACCESS/FEES/RESTRICTIONS
Through contact person/Fees to be determined/No restrictions

COVERAGE
Nova Scotia

PERIOD OF RECORD/UPDATE FREQUENCY
1979 to 1986/Will not be updated

FORMAT
Hard copy – regional classification maps (including bogs greater than 10 ha), summary report, computer printout for each peat bog. Digital – stored on computer tape

DATA TYPE/PARAMETERS MEASURED
Physical/type, surface morphology, peat type, cross section and survey of bog, drainage, location, access recommended usage
Biological/vegetation

SAMPLING PROCEDURES
Air photos, field surveys

PROGRAM TYPE
Research, survey

COMMENTS
Most of the data will be summarized in a forthcoming publication.

TITLE
Water Quality Data Base

CONTACT
Dr. A. Blouin, Department of Environment and Lands, P.O. Box 8700, St. John's, Newfoundland, A1B 4J6, (709) 576-2563

PURPOSE
Storage and management of surface water quality data for Newfoundland and Labrador

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/No restrictions

COVERAGE
Provincial data from 1977-1986, joint federal/provincial data from 1986 to present

PERIOD OF RECORD/UPDATE FREQUENCY
1977-present/Updated several times a year

FORMAT
dbase IV database files on microcomputer

DATA TYPE/PARAMETERS MEASURED
Chemical/major ions, nutrients, metals, OC/PCBs from water, sediment and fish tissue

SAMPLING PROCEDURES
Grab samples, usually monthly

PROGRAM TYPE
Federal/provincial water quality monitoring agreement

COMMENTS
This database provides data coverage which is also available on NAQUADAT, and through Inland Waters Directorate, Moncton, N.B.

TITLE
Distribution of Whales and Seals

CONTACT
P. Brodie, Fisheries Oceans Canada, Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, N.S., B2Y 4A2, (902) 426-6325

PURPOSE
To determine the distribution and abundance of whales and seals

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/No restrictions

COVERAGE
Atlantic Provinces — offshore waters and onshore seal colonies

PERIOD OF RECORD/UPDATE FREQUENCY
Early 1950s to present/Variable, although counts of some species of seals are updated annually

FORMAT
Hard copy reports, publications and data files. Data on harp and hooded seals is computerized

DATA TYPE/PARAMETERS MEASURED
Biological/distribution and abundance estimates of whales and seals, especially at areas of food abundance and at seal whelping colonies

SAMPLING PROCEDURES
Strip surveys, field surveys at breeding grounds, aerial and shipborne surveys

PROGRAM TYPE
Research, monitoring

COMMENTS
Contact person has access to several data bases and scientific studies.

TITLE
Geotechnical Borehole Data

CONTACT
Dr. John Brown, Jacques, 3 Spectacle Drive, Halifax City of Lakes Industrial Park, Halifax, N.S., B3B 1W8, (902) 468-7777

PURPOSE
To maintain geotechnical data for clients and future contracts

ACCESS/FEES/RESTRICTIONS
Through contact person/Variable – to be determined/Most of the data is proprietary – may be released with permission of the client

COVERAGE
Atlantic Provinces, Quebec and Ontario

PERIOD OF RECORD/UPDATE FREQUENCY
1973 to present/Variable

FORMAT
Hard copy – reports and files

DATA TYPE/PARAMETERS MEASURED
Physical/geotechnical data, borehole records, grain size analysis, permeability, porosity, water content
Chemical/baseline water quality information

SAMPLING PROCEDURES
Borehole, core and grab samples

PROGRAM TYPE
Research, monitoring, survey

COMMENTS
Jacques Whitford and Associates has an extensive net of borehole sampling locations, including marine areas.
Data difficult to access.
Jacques Whitford and Associates also has a large hydrogeology and geotechnical engineering library.

TITLE
PIROP I (Shipboard Surveys)

CONTACT
R.G.B. Brown, Canadian Wildlife Service, Environment Canada, Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, N.S., B2Y 4A2, (902) 426-2578

PURPOSE
Data used to plot seabird distribution at sea and to relate seabird distribution to oceanographic conditions

ACCESS/FEES/RESTRICTIONS
Through contact person/Subject to a fee to cover computer time/None

COVERAGE
Atlantic Provinces – Offshore waters from Georges Bank to Baffin Bay. Also includes data from Peru, Chile, California, the Barents Sea and Senegal

PERIOD OF RECORD/UPDATE FREQUENCY
1969 to present/Continuous

FORMAT
Digital – CDC CYBER at the Bedford Institute of Oceanography. Hard copy – atlas, reports and computer generated distribution plots

DATA TYPE/PARAMETERS MEASURED
Biological/number of birds sighted per 10 minute watch; seabird species include shearwaters, razorbills, storm-petrels, gulls, murres, puffins, gannets, phalaropes, jaegers, fulmars, cormorants, dovekies, terns and black guillemots.

SAMPLING PROCEDURES
Shipboard watches

PROGRAM TYPE
Research, survey and monitoring

COMMENTS
Extensive coverage of seasonal seabird distribution from Georges Bank to Baffin Bay.
International data also being accumulated.
The data is usually distributed to the public on computer generated plots.

TITLE
PIROP II (Aerial Surveys)

CONTACT
R.G.B. Brown, Canadian Wildlife Service, Environment Canada, Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, N.S., B2Y 4A2, (902) 426-2578

PURPOSE
Data used to plot seabird distribution at sea and to relate seabird distribution to oceanographic conditions

ACCESS/FEES/RESTRICTIONS
Through contact person/A fee may be charged to cover computer costs/None

COVERAGE
Newfoundland – Grand Banks and Labrador Shelf, Baffin Bay

PERIOD OF RECORD/UPDATE FREQUENCY
Late 1970s/Will not be updated unless new studies are initiated

FORMAT
Digital – CDC CYBER at the Bedford Institute of Oceanography

DATA TYPE/PARAMETERS MEASURED
Biological/number of birds per minute of watch. Seabird species include shearwaters, storm-petrels, gulls, terns, murres, puffins, gannets, jaegers, fulmars, cormorants, dovekies, phalaropes, guillemots, razorbills and black guillemots

SAMPLING PROCEDURES
Aerial surveys

PROGRAM TYPE
Research, monitoring and survey

COMMENTS
Coverage related to oil and gas exploration activities on the Grand Banks, Labrador Shelf and Baffin Bay.

TITLE
Atlantic Canada Water Quality Monitoring Program for Mussel Growers

CONTACT
Mike Brylinsky, Acadia Centre for Estuarine Research, Acadia University, Wolfville, Kings County, N.S., B0P 1X0, (902) 542-2201

PURPOSE
To assess water quality at mussel aquaculture sites across the region, and to relate water quality to mussel settlement, growth and survival

ACCESS/FEES/RESTRICTIONS
Through contact person and project sponsors/No charge/None

COVERAGE
Atlantic Provinces — coastal and estuarine waters throughout the region

PERIOD OF RECORD/UPDATE FREQUENCY
October 1987 to present/Continuous

FORMAT
Digital — CYBER 180 — Fortran

DATA TYPE/PARAMETERS MEASURED
Physical/stability of stratification
Chemical/temperature, salinity, secchi depth, suspended particulate matter, particulate organic carbon
Biological/chlorophyll, mussel growth and size, spatfall times and densities, gonad weights, glycogan contents

SAMPLING PROCEDURES
Bi-weekly sampling by mussel growers according to standardized methods

PROGRAM TYPE
Research monitoring

COMMENTS

TITLE:
NATCHEM (National Atmospheric Chemistry Data Base)

CONTACT:
C. Ro, Environment Canada, Atmospheric Environment Service, 4905 Dufferin Street, Downsview, Ontario, M3H 5T4, (416) 739-4455

PURPOSE:
To consolidate all Canadian precipitation chemistry and site data into a single data base

ACCESS/FEES/RESTRICTIONS:
Through contact person/Fees to be determined/No restrictions

COVERAGE:
Canada

PERIOD OF RECORD/UPDATE FREQUENCY:
1977 to present/Annual

FORMAT:
Hard copy – contour maps, statistical reports; Digital IBM compatible mainframe computer, IBM PC with dBase III Plus software

DATA TYPE/PARAMETERS MEASURED:
Physical/precipitation amount and type, snowfall cover
Chemical/pH, sulphate, nitrate, ammonium, chloride, potassium, calcium, magnesium, will be adding metals and other toxic contaminants at a later date

SAMPLING PROCEDURES:
Automated precipitation samplers, standard precipitation gauges

PROGRAM TYPE:
Monitoring

COMMENTS:
Parameter contour maps and statistical analysis will be performed from data in the data base. NATCHEM is still being developed and will include:

1) *CANSAP – The Canadian Network for Sampling Precipitation;*
2) *CAPMON – Canadian Air and Precipitation Monitoring Network;*
3) *Provincial precipitation monitoring networks;*
4) *U.S. annual and seasonal precipitation chemistry statistics;*
5) *Provincial and federal air monitoring network descriptive information.*

TITLE
Marine Monitoring Data

CONTACT
Tim Judge, Martec Ltd., 5670 Spring Garden Road, Suite 805, Halifax, N.S., B3J 1H6, (902) 425-5101

PURPOSE
To provide a geographical and scientific context for current and future projects

ACCESS/FEES/RESTRICTIONS
Through contact person/Minimal cost recovery/No restrictions, although the release of recent data has to be approved by clients

COVERAGE
Nova Scotia — Sable Island Bank, inshore coastal areas from Cape Breton to Yarmouth; New Brunswick — Saint John Harbour; Newfoundland — West coast Arctic - Melville Island

PERIOD OF RECORD/UPDATE FREQUENCY
1977 to present/Variable

FORMAT
Most hard copy, current meter data digitized on CDB CYBER mainframe computer

DATA TYPE/PARAMETERS MEASURED
Physical/temperature, currents, sediment grain size analysis
Chemical/oil and grease, cadmium, mercury, lead, zinc, PCB, DDT, salinity
Biological/benthic counts

SAMPLING PROCEDURES
Field surveys — grab smaples, current meters, underwater videos, diver surveys

PROGRAM TYPE
Research, monitoring, survey

COMMENTS
Data base used to define trends in various parameters — may be used as baseline data for further research

TITLE
HYDAT (National Hydrometric Data Bank)

CONTACT
John Clarke or Dave Randall, Inland Waters Directorate, Environment Canada, Dartmouth, N.S., B2Y 2N6, (902) 426-5777

PURPOSE
To provide comprehensive and timely data on the state of Canada's water resources

ACCESS/FEES/RESTRICTIONS
Through contact person/Variable, depending on size of the requests/None

COVERAGE
Canada — including freshwater resources in the 4 Atlantic Provinces

PERIOD OF RECORD/UPDATE FREQUENCY
1900 to present/Continuous

FORMAT
Hard copy — annual reports; Digital — PDP 11/44 computer in Dartmouth, CDC CYBER in Ottawa, IPAR interactive procedure

DATA TYPE/PARAMETERS MEASURED
Physical/streamflow, lake levels, suspended sediments, river level and velocity, water temperature, ice conditions, bed material

SAMPLING PROCEDURES
Field surveys

PROGRAM TYPE
Monitoring

COMMENTS
Sampling stations located on most major rivers in the Atlantic Provinces.
Data provided on magnetic tape or by the IPAR interactive access to the computerized data bank.
Non-computer data available upon requests from national and regional offices.
Real-time data available upon special arrangement.
Immediate to 2 week turnaround time for data requests.

TITLE
Creel Censuses – National Parks

CONTACT
Gary Corbett, Canadian Parks Service, Environment Canada, Historic Properties, Upper Water Street, Halifax, N.S., B3J 1S9, (902) 426-3432

PURPOSE
To determine the health and relative abundance of game fish stocks in national parks. Data to help monitor angling activity in parks

ACCESS/FEES/RESTRICTIONS
Through contact person/Free of charge/None

COVERAGE
Atlantic Region – rivers, lakes and streams within national parks

PERIOD OF RECORD/UPDATE FREQUENCY
1930s to present/Annually

FORMAT
Hard copy and digital – IBM PC compatibles; D Base III data base package and Micro-fish statistical software

DATA TYPE/PARAMETERS MEASURED
Biological/fish distribution and abundance, catch per unit effort, disease or parasites in fish, length, weight

SAMPLING PROCEDURES
Standard field methods, angling records

PROGRAM TYPE
Monitoring

COMMENTS
Most of the national parks have undertaken Creel Censuses – same methodology throughout. Data is gathered throughout the summer and updated at the end of the year. This includes contacting anglers for catch per unit of effort data.

TITLE
Fish Health Data Base – Maritime Provinces

CONTACT
J.W. Cornick, Fisheries & Oceans Canada, Fish Health Unit, P.O. Box 550, Halifax, N.S., B3J 2S7

PURPOSE
To record inventories of fish disease distribution throughout the Maritime Provinces and provide case file storage and report writing functions

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/Some diagnostic data for clients may be under restricted distribution

COVERAGE
Nova Scotia, New Brunswick, Prince Edward Island – fish collected from fresh and salt water

PERIOD OF RECORD/UPDATE FREQUENCY
1974 to present/Daily

FORMAT
Hard copy; Digital – microcomputer

DATA TYPE/PARAMETERS MEASURED
Biological/disease agents

SAMPLING PROCEDURES
Autopsy and bacteriological, virological and parasitological examination of fish

PROGRAM TYPE
Monitoring

COMMENTS
Also includes some chemical and physical data such as temperature, pH and dissolved oxygen.

TITLE
Minerals (Aggregate) Data Base

CONTACT
Wayne MacQuarrie, Department of Energy and Forestry, P.O. Box 2000, Charlottetown, P.E.I., C1A 7N8, (902) 368-5022

PURPOSE
To compile aggregate (sand and gravel) data for Prince Edward Island and to make the information available to the public and aggregate owners

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
Prince Edward Island

PERIOD OF RECORD/UPDATE FREQUENCY
1986 to present/Periodically

FORMAT
Hard copy reports; Digital – IBM PC computer, D Base III

DATA TYPE/PARAMETERS MEASURED
Physical/site locations, dimensions, depth, composition

SAMPLING PROCEDURES
Field surveys including backhoe pits, well logs

PROGRAM TYPE
Monitoring

COMMENTS
Data base part of a 3 year federal/provincial mineral development agreement.

TITLE
Forest Bird Habitat Requirements

CONTACT
D. Busby, Canadian Wildlife Service, Environment Canada, P.O. Box 400, Fredericton, N.B., E3B 4Z9, (506) 452-3086

PURPOSE
To collect baseline data to help determine the effects of forestry practices on bird abundance

ACCESS/FEES/RESTRICTIONS
Through contact person/Variable, depending on request/Restrictions to be determined per individual request

COVERAGE
New Brunswick

PERIOD OF RECORD/UPDATE FREQUENCY
1988 to present/Ongoing

FORMAT
Hard copy data files – data may be computerized on IBM PC

DATA TYPE/PARAMETERS MEASURED
Physical/
Biological/physical characteristics of forest, bird abundance and distribution

SAMPLING PROCEDURES
Field surveys – singing bird censuses, point locations within various forest habitat types are sampled

PROGRAM TYPE
Research

COMMENTS
Study in progress, future depends on acquiring funding.

TITLE
Wild Fur Harvesting Data

CONTACT
Randall Dibblee, Fish and Wildlife Branch, Department of the Environment, P.O. Box 2000, Charlottetown, P.E.I., C1A 7N8, (902) 368-4683

PURPOSE
Monitor annual harvests as an aid in population management

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
Prince Edward Island

PERIOD OF RECORD/UPDATE FREQUENCY
1971 to present/Annual

FORMAT
Hard copy — available in tabular form

DATA TYPE/PARAMETERS MEASURED
Biological and socio-economic/annual harvest by species, average price per pelt, total value by species, licensed trappers

SAMPLING PROCEDURES
Determined through wild fur export permit records

PROGRAM TYPE
Monitoring

COMMENTS

TITLE
Snow Survey Data Base

CONTACT
Jim DeVenney, New Brunswick Department of Environment, P.O. Box 6000, Fredericton, N.B., E3B 5H1, (506) 453-2353

PURPOSE
To aid in flood forecasting and water management

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
New Brunswick and the Saint John River Basin

PERIOD OF RECORD/UPDATE FREQUENCY
1954 to present/6 times a year

FORMAT
Hard copy and digital — UNISYS UNIVAX computer — Fortran

DATA TYPE/PARAMETERS MEASURED
Physical/depth and water equivalent of snow cover

SAMPLING PROCEDURES
Core samples from snow

PROGRAM TYPE
Monitoring

COMMENTS
End analysis of raw data available on hard copy.

TITLE
NAQNSWELL/NAQUADAT

CONTACT
Herb Doane, Nova Scotia Department of the Environment, P.O. Box 2107, Halifax, N.S., B3J 3B7, (902) 424-5300

PURPOSE
To maintain an inventory of chemical concentrations in wells throughout Nova Scotia

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
Nova Scotia — well water sampling results

PERIOD OF RECORD/UPDATE FREQUENCY
1970s to 1985/As required

FORMAT
Hard copy and digital — System 2000 (NAQUADAT) in Ottawa (subject to revision to ORACLE)

DATA TYPE/PARAMETERS MEASURED
Chemical/sulphate, ammonia, metals, hardness, pH, etc.

SAMPLING PROCEDURES
Standard water sampling methods, and owner sampling

PROGRAM TYPE
Monitoring, survey, complaints response

COMMENTS
System not totally up-to-date.
Data provided by Nova Scotia Environment and other agencies.

TITLE
Natural History – New Brunswick

CONTACT
Donald McAlpine, New Brunswick Museum, 277 Douglas Ave., Saint John, N.B., E2K 1E5, (506) 658-1842

PURPOSE
To maintain an inventory of the natural history of New Brunswick and other areas for scientific research and education

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
New Brunswick, with some information from the remainder of eastern Canada and the northeastern United States

PERIOD OF RECORD/UPDATE FREQUENCY
1860 to present/Continuous

FORMAT
Hard copy; Digital – CHIN mainframe computer (Ottawa); Other – biological specimens

DATA TYPE/PARAMETERS MEASURED
Physical/geomorphological and geological data
Chemical/concentrations of mercury and other contaminants in birds
Biological/geographical variation in the distribution of plants, animals, birds and invertebrates, reproductive data, feeding patterns

SAMPLING PROCEDURES
Variable over time

PROGRAM TYPE
Research, monitoring, survey

COMMENTS

TITLE
Park Environment Resource Description and Analysis

CONTACT
Cliff Drysdale, Canadian Parks Service, Environment Canada, Kejimkujik National Park, P.O. Box 36, Maitland Bridge, Annapolis Co., N.S., B0T 1N0, (902) 682-2770

PURPOSE
To collect baseline data to support park management decisions

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
Nova Scotia – Kejimkujik National Park

PERIOD OF RECORD/UPDATE FREQUENCY
1978 to present/Continuous

FORMAT
Digital information is available on dBase III

DATA TYPE/PARAMETERS MEASURED
Physical/Weather, geology, geography, geomorphology, soils, archaeology, human history
Chemical/water chemistry
Biological/animal populations and distribution, vegetation

SAMPLING PROCEDURES
Field sampling, field observations, aerial surveys

PROGRAM TYPE
Research, monitoring, survey

COMMENTS
Similar programs are conducted at other National Parks in the Atlantic Region. Data available on:
- *Fish – habitat, catch statistics, pH data related to egg survival and development.*
- *Reptiles and Amphibians – population, distribution, genetic mapping in conjunction with Acadia University.*
- *Birds – species check list, breeding bird surveys, loon breeding success, piping plover management program.*
- *Mammals – deer population studies, racoon management program, browse surveys, marten re-introduction program.*
- *Invertebrates – joint study with the Canadian Forestry Service on spruce budworm and gypsy moth.*
- *Water quality – lake coliform counts, water levels, lake productivity, acid rain studies since 1978, the impact of bog pH on streams, groundwater, coastal marine ecology study.*
- *Vegetation – species distribution, forest study plots.*
- *Archaeology and human history.*
- *Climate*

TITLE
Habitat Alteration Referral System Data Base

CONTACT
Andre Ducharme, Habitat Management Branch, Fisheries & Oceans Canada, Scotia-Fundy Region, P.O. Box 550, Halifax, N.S., B3J 2S7, (902) 426-5933

PURPOSE
To provide easy access to referral files, and track the progress and status of referred projects

ACCESS/FEES/RESTRICTIONS
Through contact person or Don Cox, Habitat Referrals and Liaison Division, Halifax (902) 426-2999/No charge/Restrictions on some open files

COVERAGE
Nova Scotia and New Brunswick drainage basins flowing into the Bay of Fundy or the Atlantic Ocean and associated coastal and offshore to the 200 mile limit

PERIOD OF RECORD/UPDATE FREQUENCY
Stream alterations from 1967 to date; All others 1980 to date/Continual update

FORMAT
Digital IBM-PC (INDEX); paper and microfiche files

DATA TYPE/PARAMETERS MEASURED
Biological/
Physical/
Chemical/fish habitat parameters and some water chemistry depending on project type, proponent, location, type of work, DFO contact, responses, restrictions, review and project status, and limited follow-up information

SAMPLING PROCEDURES
Referral documents, and field investigations as required by the project type to support DFO response

PROGRAM TYPE
Survey

COMMENTS

TITLE
Aquaculture Lease Information

CONTACT
Dr. Catherine Enright, Aquaculture and Inland Fisheries Division, Nova Scotia Department of Fisheries, P.O. Box 2223, Halifax, N.S., B3J 3C4, (902) 424-4560

PURPOSE
To help administer provincial aquaculture program

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/Business information is restricted

COVERAGE
Nova Scotia – coastal waters

PERIOD OF RECORD/UPDATE FREQUENCY
1986 to present/Continuous

FORMAT
Hard copy – maps and files; digital – IBM PC AT computer, Geomate software for computer generated maps, in progress (presently not available)

DATA TYPE/PARAMETERS MEASURED
Physical/
Chemical/temperature, salinity, location of lease
Biological/biomass, production, species grown
Economic/licences, fees,

SAMPLING PROCEDURES
Standard field sampling methods; some information is obtained from lease applications

PROGRAM TYPE
Monitoring

COMMENTS
Data base information available at Nova Scotia Department of Fisheries offices in Halifax, Pictou and Musquodoboit Harbour.

TITLE
Coastal Information System

CONTACT
Bob Taylor, Don Forbes, Energy, Mines and Resources Canada, Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, N.S., B2Y 4A2, (902) 426-7736

PURPOSE
To provide a central storage of geomorphological information for research and advice to other agencies

ACCESS/FEES/RESTRICTIONS
Through contact person/Variable, small requests free of charge, costs negotiable on an individual basis for larger requests/No restrictions

COVERAGE
Beaufort Sea, Southeast Newfoundland, Eastern Shore of Nova Scotia

PERIOD OF RECORD/UPDATE FREQUENCY
1981 to present/Variable

FORMAT
Digital – System 2000, CDC CYBER computer

DATA TYPE/PARAMETERS MEASURED
Physical/geological description of geomorphological features, shore-zone morphology, types of material, survey and sample data

SAMPLING PROCEDURES
Air photos and video, ground surveys, nearshore surveys, and sediment sampling

PROGRAM TYPE
Research, monitoring, survey

COMMENTS
Information used for a variety of purposes including coastal classification and inventory, coastal stability assessment, evaluation of constraints to development, and coastal hazard identification.

TITLE
ATLMON (Atlantic Monitoring Data)

CONTACT
André Gauthier, Environmental Protection, Environment Canada, Dartmouth, N.S., B2Y 2N6, (902) 426-4141

PURPOSE
To maintain a compendium of data analyzed by the Environmental Protection Laboratory, Dartmouth, N.S.

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
Atlantic Region – marine, freshwater, estuaries, wastewater

PERIOD OF RECORD/UPDATE FREQUENCY
1974 to 1989/No longer updated

FORMAT
Digital – CDC CYBER – Ottawa, Ontario, System 2000

DATA TYPE/PARAMETERS MEASURED
Physical/
Chemical/
Biological/over 200 chemical and physical parameters in water, sediment and biota.

SAMPLING PROCEDURES
According to methods approved by Environment Canada

PROGRAM TYPE
Research, monitoring, survey

COMMENTS
This data base contains all the data collected and analyzed by the Air & Water Branch, Environment Canada, Atlantic Region (except for air quality data on NAPS data base). System capable of statistical analysis.

TITLE
Groundfish Surveys Research Data Base

CONTACT
Stratis Gavaris, Fisheries Oceans Canada, Biological Station, St. Andrews, N.B., E0G 2X0, (506) 529-8854

PURPOSE
To collect information on fish distribution and abundance for stock assessments

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
Nova Scotia and New Brunswick — Bay of Fundy, Georges Bank, Gulf of Maine, Scotian Shelf

PERIOD OF RECORD/UPDATE FREQUENCY
1958 to present/Several times per year

FORMAT
Digital — HP 3000 in St. Andrews; copy of data on tape at the Bedford Institute, Dartmouth, N.S.

DATA TYPE/PARAMETERS MEASURED
Physical/location of catch, bottom and surface temperatures
Biological/number of fish caught, weight caught, length, weight, sex, species, age of individual fish, parasites and stomach contents

SAMPLING PROCEDURES
Bottom trawl surveys

PROGRAM TYPE
Research, monitoring

COMMENTS
Although used for stock assessments, can be used to determine fish abundance at offshore developments. Not well suited for localized estimation but adequate for global estimates of large blocks.

TITLE
Game Harvesting Data

CONTACT
Alan Godfrey, Fish and Wildlife Branch, Department of the Environment, P.O. Box 2000, Charlottetown, P.E.I., C1A 7N8, (902) 368-4683

PURPOSE
To record long term population trends in game populations

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
Prince Edward Island

PERIOD OF RECORD/UPDATE FREQUENCY
1970 – 1987/Annual

FORMAT
Hard copy

DATA TYPE/PARAMETERS MEASURED
Biological/numbers of animals harvested

SAMPLING PROCEDURES
Random sample from previous year's license sales

PROGRAM TYPE
Monitoring

COMMENTS

TITLE
Fish Populations at Fishways

CONTACT
Alan Godfrey, Fish and Wildlife Branch, Department of the Environment, P.O. Box 2000, Charlottetown, P.E.I., C1A 7N8, (902) 368-4683

PURPOSE
To assess timing and magnitude of anadramous fish populations passing through fishways

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
Prince Edward Island

PERIOD OF RECORD/UPDATE FREQUENCY
1971 – present, inclusive/Varies for individual systems but done on an annual basis on some systems

FORMAT
Hard copy

DATA TYPE/PARAMETERS MEASURED
Biological/water temperature, number of fish, size, species

SAMPLING PROCEDURES
Location of trap sites decided on an annual basis depending on budget

PROGRAM TYPE
Survey

COMMENTS

TITLE
Water Quality Information

CONTACT
Norm Gridley, Porter-Dillon Ltd., Suite 202, 2651 Dutch Village Road, Halifax, N.S., B3L 4G5, (902) 453-1115

PURPOSE
To maintain data accumulated by Porter-Dillon Ltd. from client contracts

ACCESS/FEES/RESTRICTIONS
Through contact person/Costs to be determined per individual request/ Some information is proprietary

COVERAGE
Primarily Nova Scotia, with some data from New Brunswick and Prince Edward Island

PERIOD OF RECORD/UPDATE FREQUENCY
1975 to present/Variable

FORMAT
Hard copy and digital – IBM PC compatible, D Base III Plus and Symphony software packages

DATA TYPE/PARAMETERS MEASURED
Chemical/standard water quality parameters – pH, nutrients, major ions, metals, occasionally organic contaminants and pesticides some surface water flow rate data

SAMPLING PROCEDURES
Standard field sampling methods – primarily grab samples

PROGRAM TYPE
Monitoring, some research and survey, environmental assessments

COMMENTS
60% of the data is on groundwater.
Information primarily used as baseline data prior to industrial development.
Some information is proprietary to clients.

TITLE
Natural Areas – Prince Edward Island

CONTACT
Dianne Griffin, Island Nature Trust, P.O. Box 265, Charlottetown, P.E.I., C1A 7K4, (902) 566-9150, (902) 892-7513

PURPOSE
Educational information and to maintain data to help preserve natural areas in Prince Edward Island

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
Prince Edward Island

PERIOD OF RECORD/UPDATE FREQUENCY
1972 to present/Daily

FORMAT
Hard copy – unpublished files and reports; Digital – Tandy TRS 80 computer

DATA TYPE/PARAMETERS MEASURED
Physical/size and location of natural areas, soils, land use
Chemical/soil acidity
Biological/species distribution and abundance, height and diameter of trees

SAMPLING PROCEDURES
Field surveys and air photo interpretation

PROGRAM TYPE
Research, monitoring, survey

COMMENTS
The Island Nature Trust works to preserve natural areas in Prince Edward Island through the acquisition, private stewardship and leasing of properties.
There are over 50 natural areas in the province which are being considered for protection.

TITLE
Compilation of Information on Surficial Mineral Resources off Eastern Canada

CONTACT
Peter Hale, Ocean Mining Division, Energy Mines & Resources Canada, 580 Booth St., Ottawa, Ontario, K1A 0E4, (613) 992-8589

PURPOSE
To provide a nearshore data compilation which could be used to help plan non-fuel mineral exploration programs

ACCESS/FEES/RESTRICTIONS
Through contact person, or Earth and Ocean Research Ltd., Dartmouth, N.S., (902) 465-3974, or provincial mines departments in the Atlantic Provinces/May be some cost recovery/No restrictions in access

COVERAGE
Atlantic Region — Coastal areas to 50 m depth

PERIOD OF RECORD/UPDATE FREQUENCY
Historical and present/May be updated in future

FORMAT
Hard copy and digital — IBM PC compatible — D Base III

DATA TYPE/PARAMETERS MEASURED
Physical/seismic data, bottom photos, bottom and sub-bottom samples
Chemical/metals.

SAMPLING PROCEDURES
Compilation of existing information

PROGRAM TYPE
Research, monitoring, survey

COMMENTS
Intended to serve as a first step towards producing comprehensive integrated resource planning maps which will identify areas of mineral potential relative to environmental and fisheries concerns.
Large 3 volume hard copy report is being held at provincial mines departments, the Bedford Institute of Oceanography Library, Energy, Mines and Resources, Ottawa, Canada, and at Earth & Ocean Research Ltd.
Contact person has a 20 floppy disk set which contains computerized maps which can be manipulated for further study. Copies of this may be obtained from Earth and Ocean Research Ltd.

TITLE
SID (Sample Information Data Base)

CONTACT
I.A. Hardy, Energy, Mines and Resources Canada, Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, N.S., B2Y 4A2, (902) 426-6127

PURPOSE
To compile site-specific information and subsequent subsample analyses for marine geological samples collected by GSC/AGC officials

ACCESS/FEES/RESTRICTIONS
Through contact person/Variable, depending on size of the request/No restrictions

COVERAGE
Atlantic Provinces — marine areas

PERIOD OF RECORD/UPDATE FREQUENCY
1962 to present/Daily

FORMAT
Digital — CDC CYBER 840, System 2000; IBM compatible computer — D Base III Plus

DATA TYPE/PARAMETERS MEASURED
Physical/geological parameters

SAMPLING PROCEDURES
Core, dredge and grab samples from survey vessels

PROGRAM TYPE
Research, monitoring, survey

COMMENTS
25,000 entries in data base.
Site specific information is acquired in the field with D Base III Plus and is down loaded to SID upon cruise termination.
Data base will be transferred to the Oracle data base management package in the near future

TITLE
SAD (Sample Analysis Data Base)

CONTACT
I.A. Hardy, Energy, Mines and Resources Canada, Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, N.S., B2Y 4A2, (902) 426-6127 or 426-8319

PURPOSE
To digitize all sediment size analyses performed on Atlantic Geoscience Centre holdings

ACCESS/FEES/RESTRICTIONS
Through contact person/Variable, depending on size of the request/No restrictions

COVERAGE
Atlantic Provinces — marine sediments

PERIOD OF RECORD/UPDATE FREQUENCY
1962 to present/Variable

FORMAT
Digital — CDC CYBER 840, System 2000; IBM PC XT, D Base III and Pascal

DATA TYPE/PARAMETERS MEASURED
Physical/sediment grain size analysis

SAMPLING PROCEDURES
Cores, boreholes, grabs

PROGRAM TYPE
Research, monitoring, survey

COMMENTS
Over 15,000 records in data base.
Data base still being verified.
Data base will be transferred to the Oracle data base management package in the near future

TITLE
Watershed Biogeochemistry

CONTACT
Bill Hart, Technical University of Nova Scotia, Centre for Water Resources and Civil Engineering, P.O. Box 1000, Halifax, N.S., B3J 2X4, (902) 429-8300

PURPOSE
To study the effects of wet and dry atmospheric deposition on watershed acidification

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge to cooperating agencies/Available to cooperating agencies

COVERAGE
Metropolitan Halifax area

PERIOD OF RECORD/UPDATE FREQUENCY
1981 to present/Weekly

FORMAT
Hard copy and digital

DATA TYPE/PARAMETERS MEASURED
Chemical/major ions in precipitation throughfall, streamflow, soil matrix, groundwater.

SAMPLING PROCEDURES
Manual

PROGRAM TYPE
Research

COMMENTS
Precipitation recorded from 1981 to present. Other components sampled from 1987 to 1990.

TITLE
Halifax Urban Watersheds Water Quality

CONTACT
Bill Hart, Technical University of Nova Scotia, Centre for Water Resources and Civil Engineering, P.O. Box 1000, Halifax, N.S., B3J 2X4, (902) 429-8300

PURPOSE
To determine the effects of urban development on lake water quality and quantity

ACCESS/FEES/RESTRICTIONS
Through contact person/Variable costs involved/Very little restricted

COVERAGE
Halifax Metropolitan area

PERIOD OF RECORD/UPDATE FREQUENCY
1981 to present/Monthly, although sampling is conducted daily at certain times of the year

FORMAT
Digital

DATA TYPE/PARAMETERS MEASURED
Physical/
Chemical/
Biological (mostly physical and chemical) – urban development, urban runoff – 25-30 standard freshwater quality parameters including nutrients, suspended solids, dissolved oxygen, pH, metals

SAMPLING PROCEDURES
Automatic samplers and manual water sampling.

PROGRAM TYPE
Research, monitoring, survey

COMMENTS

TITLE
Flood Risk Map

CONTACT
E. Langley, Inland Waters Directorate, Environment Canada, Dartmouth, N.S., B2Y 2N6, (902) 426-2132

PURPOSE
To accumulate data to reduce flood damage

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None; also through Provincial Environment Departments and Provincial Map Agencies

COVERAGE
Canada — includes Nova Scotia, New Brunswick and Newfoundland

PERIOD OF RECORD/UPDATE FREQUENCY
1976 to present/Initial data collection still ongoing

FORMAT
Hard copy — includes maps of flood plains

DATA TYPE/PARAMETERS MEASURED
Physical/areal extent of flood plains, cross sections, hydraulic structures, ice, water levels, flow

SAMPLING PROCEDURES
Field surveys, compilation of existing data

PROGRAM TYPE
Study, monitoring, survey, investigation

COMMENTS
Maps used to direct development away from flood-prone areas through a designation process by federal and provincial Environment Departments.
Purpose is to reduce flood damages.
Maps used to create a public awareness of flood-prone areas.
Maps used for zoning/regulation purposes.
Data used to assist in flood forecasts for the Saint John River (federal/provincial agreement).

TITLE
Surface Water Quality Reference System

CONTACT
Nova Scotia Department of Environment, P.O. Box 2107, Halifax, N.S., B3J 3B7, (902) 424-5300 (contact Andrew Cameron, Assessment Division)

PURPOSE
To maintain an index and inventory of water quality reports to assess changes in water chemistry over time

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
Nova Scotia – lakes throughout the province

PERIOD OF RECORD/UPDATE FREQUENCY
1905 to 1984/Has not been updated since 1984

FORMAT
Hard copy – files, index cards and reports.

DATA TYPE/PARAMETERS MEASURED
Chemical/water quality data on over 1000 lakes in Nova Scotia – parameters include: dissolved oxygen, pH, nitrogen, phosphorous, alkalinity, metals

SAMPLING PROCEDURES
Varied over time.

PROGRAM TYPE
Research, monitoring and survey

COMMENTS
NSDOE is investigating the feasibility of computerizing the data.
Data originates from a very wide variety of sources.
Data is referenced by grid and location (data compiled for each lake).

TITLE
Natural History Collection Files

CONTACT
Derek Davis, Nova Scotia Museum, 1747 Summer Street, Halifax, N.S., B3H 3A6, (902) 429-4610

PURPOSE
Biological and physical inventories of sections of Nova Scotia, with particular emphasis on ecological reserves and parks

ACCESS/FEES/RESTRICTIONS
Through contact person/No cost/None

COVERAGE
Nova Scotia — Natural history of Nova Scotia

PERIOD OF RECORD/UPDATE FREQUENCY
1850s to present/Annually

FORMAT
Digital — Apple PC

DATA TYPE/PARAMETERS MEASURED
Physical/geological information, wetlands, geomorphology
Biological/wildlife distribution, bird distribution, plants, rare and endangered species

SAMPLING PROCEDURES
Compilation of field data. Data from maps, air photos

PROGRAM TYPE
Research, monitoring, survey

COMMENTS
Good baseline data from which to study changes in community structure.
Good inventory of data on ecological reserves and other important or sensitive natural areas.

TITLE
Coastal Waterfowl Survey

CONTACT
Bruce Johnson, Canadian Wildlife Service, Environment Canada, Sackville, N.B., P.O. Box 1590, E0A 3C0, (506) 536-3025

PURPOSE
To document bird distribution and abundance in coastal waters

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
Nova Scotia, Prince Edward Island, New Brunswick — uneven coverage

PERIOD OF RECORD/UPDATE FREQUENCY
1966 to present/Periodic; no set survey program

FORMAT
Digital

DATA TYPE/PARAMETERS MEASURED
Biological/Number of birds, location, time of survey, pre and post season counts

SAMPLING PROCEDURES
Aerial surveys

PROGRAM TYPE
Monitoring

COMMENTS
Database is uneven. Many areas have limited coverage.

TITLE
Colonial Birds in the Maritimes – Atlantic Canada.

CONTACT
Bruce Johnson, Canadian Wildlife Service, Environment Canada, Sackville, N.B., P.O. Box 1590, E0A 3C0, (506) 536-3025

PURPOSE
To monitor the status of bird populations at colonies in the Maritime Provinces.

ACCESS/FEES/RESTRICTONS:
Through contact person/No charge/None.

COVERAGE
Nova Scotia, New Brunswick, Prince Edward Island – primarily coastal areas

PERIOD OF RECORD/UPDATE FREQUENCY
1960s to present/Annual.

FORMAT
Hard copy – binder form on topographic charts

DATA TYPE/PARAMETERS MEASURED
Biological/number of breeding pairs, location of colonies.

SAMPLING PROCEDURES
Ground and aerial surveys

PROGRAM TYPE
Monitoring.

COMMENTS

TITLE
Piping Plover Nesting Sites

CONTACT
Bruce Johnson, Environment Canada, Canadian Wildlife Service, Sackville, N.B., P.O. Box 1590, E0A 3C0, (506) 536-3025

PURPOSE
To maintain data on the population of Piping Plovers in Atlantic Canada

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/Some, to prevent disturbance to birds

COVERAGE
Atlantic Provinces — Coastal beach and dune systems

PERIOD OF RECORD/UPDATE FREQUENCY
1975 to present/Uneven coverage

FORMAT
Hard copy

DATA TYPE/PARAMETERS MEASURED
Biological/number and location of breeding pairs, number of eggs per nest

SAMPLING PROCEDURES
On-site inspections during the nesting season (June-July)

PROGRAM TYPE
Monitoring.

COMMENTS
The Piping Plover is an endangered species in the Atlantic Region.
While information is generally available to the public, some discretion is used to protect breeding birds.
Data also used to evaluate usefulness of protective measures.
Surveys in National Parks are annual. Surveys elsewhere are opportunistic.
Complete survey is scheduled for 1991.

TITLE
Shellfish Lease Inventory

CONTACT
John Legault, Department of Fisheries and Oceans, Gulf Region, P.O. Box 5030, Moncton, N.B., E1C 9B6, (506) 857-6221

PURPOSE
To establish an inventory of shellfish leases

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/Income information is confidential

COVERAGE
New Brunswick and Prince Edward Island – Coastal waters of the Gulf of St. Lawrence

PERIOD OF RECORD/UPDATE FREQUENCY
Updated to January 1, 1988

FORMAT
Digital – DEC computer, INGRIS data base

DATA TYPE/PARAMETERS MEASURED
Biological/species grown, productivity of the site, location

SAMPLING PROCEDURES
Information drawn from leasing system

PROGRAM TYPE
Monitoring

COMMENTS
Computerized inventory of shellfish lease information.

TITLE
Nutrient and Biological Productivity in Atlantic Region Waters

CONTACT
J. Kerekes, Canadian Wildlife Service, Environment Canada, Dalhousie University, Halifax, N.S., B3H 4J1, (902) 426-6356

PURPOSE
To maintain data in relating water chemistry to biological production

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
Atlantic Provinces — Freshwater lakes and streams throughout the region

PERIOD OF RECORD/UPDATE FREQUENCY
1968 to present/Much of the data is not updated; some data is added each year

FORMAT
Hard copy and digital — IBM PC, Lotus 123 software.

DATA TYPE/PARAMETERS MEASURED
Physical/water temperation, colour.
Chemical/dissolved oxygen, major ions, phosphorous, nitrogen, metals.
Biological/birds, fish, chlorophyll and invertebrates.

SAMPLING PROCEDURES
Standard field sampling methods. Laboratory analysis according to standard CWS methods.

PROGRAM TYPE
Research, monitoring and survey

COMMENTS
Data not easily accessible — may take some time to satisfy information requests.
A wide variety of data has been accumulated reflecting the array of research, monitoring and survey work which has been completed over the past 20 years.

TITLE
Toxic Chemicals Data Base (NAQUADAT)

CONTACT
Hugh O'Neill, Inland Waters Directorate, Environment Canada, Federal Building, Main Street, Moncton, N.B., E1C 8N6, (506) 857-7845

PURPOSE
To monitor ambient concentrations of toxic chemicals in water, sediments and fish in the Atlantic Provinces

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
Atlantic Provinces – freshwater and estuaries

PERIOD OF RECORD/UPDATE FREQUENCY
Early 1970s to present/Very few areas resampled, although information for other areas added each year

FORMAT
Digital – LABS Eleven – compatible with NAQUADAT;
VAX 750 computer – basic language

DATA TYPE/PARAMETERS MEASURED
Chemical/
Biological/pesticides, PCB, PAH, chlorophenols and other organic contaminants in water, sediments and fish

SAMPLING PROCEDURES
Largely grab sampling – hand seine and gill nets are used to catch fish

PROGRAM TYPE
Monitoring and survey

COMMENTS
Interpretive data are available through a report series.
Much of the data is on NAQUADAT, although this system is easier to access.

TITLE
Distribution of Threatened and Endangered Species

CONTACT
Karen Lloyd, Canadian Wildlife Service, Environment Canada, National Wildlife Research Centre, Ottawa, Ontario, K1A 0H3, (819) 997-6131

PURPOSE
To determine potential impacts of agricultural pesticides on threatened and endangered species

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/Precise location of threatened and endangered species may be generalized, as specific locations for certain species cannot be released

COVERAGE
Canada – including land and marine areas of the Atlantic Provinces

PERIOD OF RECORD/UPDATE FREQUENCY
1978 to present/Annual

FORMAT
Digital – IBM-PC, D Base III, SPANS GIS for distribution maps

DATA TYPE/PARAMETERS MEASURED
Biological/distribution of threatened and endangered birds, plants, fish, mammals, reptiles and amphibians. Includes habitat description, breeding and other activities, dispersion, food, population estimates, known limiting factors, flowering, germinating and fruiting times with plants

SAMPLING PROCEDURES
Field surveys

PROGRAM TYPE
Research, monitoring, survey

COMMENTS
This data base is being used to compare the distribution of threatened and endangered species with crop lands and pesticide use.

TITLE
Sable Island Horse Survey

CONTACT
Tony Lock, Canadian Wildlife Service, Environment Canada, Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, N.S., B2Y 4A2, (902) 426-6052

PURPOSE
To monitor horse populations on Sable Island

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
Nova Scotia – Sable Island

PERIOD OF RECORD/UPDATE FREQUENCY
1960 to present/Annual

FORMAT
Hard copy

DATA TYPE/PARAMETERS MEASURED
Biological/herd numbers, seasonal distribution around the island.

SAMPLING PROCEDURES
Helicopter surveys taken in late summer/early winter

PROGRAM TYPE
Research, monitoring, survey

COMMENTS
Program sponsored by Transport Canada.
Will lead to a published paper.

TITLE
Canadian Forest Resource Data System

CONTACT
J. Lowe, PNFI, Canadian Forestry Service, Chalk River, Ontario, K0J 1J0, (613) 589-2880

PURPOSE
To maintain an inventory of the forest resources of Canada

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/Most data is aggregated from provincial sources; studies of a local nature, or involving themes sensitive to provincial mandate, may be referred to those sources

COVERAGE
Canada – including the 4 Atlantic Provinces

PERIOD OF RECORD/UPDATE FREQUENCY
1981, 1984, 1986/Forest Inventory updated every 5 years, Biomass Inventory completed in 1984

FORMAT
Digital – VAX 780, Fortran, spatial distribution on ARCINFO GIS

DATA TYPE/PARAMETERS MEASURED
Biological/species, forest type, pulpwood volumes, sawood volumes, maturity class, predominant genus, age, disturbance, site quality, ownership, biomass of merchantable and other portions of trees

SAMPLING PROCEDURES
Much of the information can be provided by provincial agencies

PROGRAM TYPE
Research, monitoring, survey

COMMENTS
System consists of 2 data bases:
1) *the Canadian Forest Inventory Data Base;*
2) *Forest Biomass Inventory Data Base.*

TITLE
Contaminants in Harbour Sediments

CONTACT
Scott MacKnight, Land and Sea Environmental Consultants Ltd., P.O. Box 190, B2Y 3Y3, (902) 463-0114, Fax: (902) 466-5743

PURPOSE
To provide historical records and background information on dredged marine sediments

ACCESS/FEES/RESTRICTIONS
Through contact person/A fee will be charged/Yes, some data may be proprietary and may only be released with client's permission

COVERAGE
Atlantic Provinces – coastal harbours throughout the region

PERIOD OF RECORD/UPDATE FREQUENCY
1976 to present/Continuous

FORMAT
Hard copy (in 1988/89 computer data base – Oracle format for PC)

DATA TYPE/PARAMETERS MEASURED
Physical/particle size, dredging information, permit no., disposal location, volume dumped, year dumped
Chemical/organic carbon, inorganic carbon, oil and grease, cadmium, mercury, lead, zinc, DDT, PCB, limited arsenic and nickel

SAMPLING PROCEDURES
Variable – grab samples or cores, some boreholes

PROGRAM TYPE
Monitoring, survey as related to ocean dumping provisions of the Canadian Environmental Protection Act

COMMENTS
The information in this data base is compiled from sediment samples from harbours of interest to Transport Canada and the Small Crafts Harbours Branch of Fisheries and Oceans Canada.
Up-to-date bibliography of studies and reports done in each harbour.

TITLE
Maritime Breeding Bird Atlas

CONTACT
Fred Scott, Coordinator, Maritime Breeding Bird Atlas, Nova Scotia Museum, 1747 Summer Street, Halifax, N.S., B3H 3A6, (902) 429-4610

PURPOSE
To record summer bird distribution and abundance throughout the three Maritime Provinces

ACCESS/FEES/RESTRICTIONS
Through contact person/Minimum fee of $100 for a full data set for a particular square/No restrictions

COVERAGE
Nova Scotia, New Brunswick, Prince Edward Island

PERIOD OF RECORD/UPDATE FREQUENCY
1986 to 1990 inclusive/Continuous, but most updating conducted in the fall

FORMAT
Hard copy – published maps and eventually an atlas
Digital – Main frame computer

DATA TYPE/PARAMETERS MEASURED
Biological/Bird counts, particularly nesting birds, per specific geographic area

SAMPLING PROCEDURES
Field surveys by a large group of volunteers

PROGRAM TYPE
Research, monitoring, survey

COMMENTS
Project ongoing – records for all species over the entire Maritime Provinces – including offshore islands.
The hard copy atlas will only publish basic distribution data. Abundance data or more precise locations of birds within 100 metre quadrats will be available in the digital data base. This will allow for special searches and statistical analysis.
Similar efforts are underway throughout most of Canada and the developed world.

TITLE:
Shellfish

CONTACT:
John Machell, or Chris Roberts, Environment Canada, Environmental Protection, Dartmouth, N.S., B2Y 2N6, (902) 426-4570 or (902) 426-4482

PURPOSE:
A compendium of sanitary data on shellfish growing areas and classifications collected through monitoring under the Canadian Shellfish Sanitation Program

ACCESS/FEES/RESTRICTIONS:
Through contact person/No charge/None

COVERAGE:
Nova Scotia, New Brunswick, Prince Edward Island — coastal waters

PERIOD OF RECORD/UPDATE FREQUENCY:
1979 to present/Annual

FORMAT:
Digital — IBM PC, dBase III
DEC VAX: Oracle RDBMS

DATA TYPE/PARAMETERS MEASURED:
Chemical/water quality data, pollutant sources in growing areas
Biological/description of sectors, closures, survey dates, key monitoring stations, bacteriological data

SAMPLING PROCEDURES:
Compilation of existing data, standard water collection techniques

PROGRAM TYPE:
Monitoring

COMMENTS:
Entire data base will be integrated with a Geographic Information System (GIS) in the near future. Newfoundland data will be added in the near future.

TITLE
Contaminant Borders and Transfers from Mother to Young in Whales and Seals

CONTACT
P. Brodie and R. Addison, Fisheries Oceans Canada, Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, N.S., B2Y 4A2, (902) 426-6325, (902) 426-3279

PURPOSE
To examine the degree that body burdens reflect background levels of contaminants and to study the extent to which plasma and mammary tissue acts as a barrier to the transfer of contaminants

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
Eastern Offshore – Sable Island, Gulf of St. Lawrence, Scotian Shelf, Arctic

PERIOD OF RECORD/UPDATE FREQUENCY
1972 to present/Variable, but annually for some sites

FORMAT
Hard copy data files and publications

DATA TYPE/PARAMETERS MEASURED
Chemical/DDT, PCB, Mixed-Function Oxidase – enzyme activity in organs such as liver as a result of contaminant streams

SAMPLING PROCEDURES
Samples collected in the field

PROGRAM TYPE
Research, monitoring

COMMENTS
Confidence in data is high. Contaminant body burdens also related to age and sex of individuals in each species. Research concentrated on physiology, energetics and biomechanics of marine mammals and their role in understanding the accumulation, processing, and transfer of contaminants.

TITLE
Environmental Chemistry Data Base

CONTACT
R. McCurdy or D. Borgol, Environmental Chemistry Division, Victoria General Hospital, 5788 University Ave., Halifax, N.S., B3H 1V8, (902) 428-3464, (902) 428-3814

PURPOSE
To store laboratory analysis records

ACCESS/FEES/RESTRICTIONS
Through contact persons/Variable, depending on size of the request/Some data is confidential

COVERAGE
Nova Scotia

PERIOD OF RECORD/UPDATE FREQUENCY
1973 to present/Daily

FORMAT
Digital – HP 1000 Computer – will be converted to a series of net worked IBM PC AT micro-computers

DATA TYPE/PARAMETERS MEASURED
Physical/pH, temperature, suspended solids, colour, turbidity, conductivity
Chemical/over 200 water quality parameters including metals, major ions, nutrients, some organic contaminants

SAMPLING PROCEDURES
Grab and composite smples referred for analysis by government agencies, industry and the public

PROGRAM TYPE
Research, monitoring, survey

COMMENTS
600,000 to 700,000 entries per year.
Data can only be accessed by sample number.
Data base covers a wide variety of environmental investigations including acid rain data, municipal and private wells, leachate, industrial and municipal wastewater, limnology and groundwater studies.

TITLE
Heathland Classification of Newfoundland

CONTACT
Bill Meades, Forestry Canada, Nfld. Forestry Centre, P.O. Box 6028, St. John's, Nfld., A1C 5X8, (709) 772-6019

PURPOSE
Forestry-related trends

ACCESS/FEES/RESTRICTIONS
Through contact person/None/None

COVERAGE
Newfoundland

PERIOD OF RECORD/UPDATE FREQUENCY
15 years/Ongoing

FORMAT
Hard copy

DATA TYPE/PARAMETERS MEASURED
Physical/total species composition, abundance, habitat features

SAMPLING PROCEDURES
Vegetation plots – cover abundance scale, soil pits

PROGRAM TYPE
Research

COMMENTS

TITLE
Succession on Disturbed Forest Land

CONTACT
Bill Meades, Forestry Canada, Nfld. Forestry Centre, P.O. Box 6028, St. John's, Nfld., A1C 5X8, (709) 772-6019

PURPOSE
Vegetation classification and succession analysis — trends and management interpretation

ACCESS/FEES/RESTRICTIONS
Through contact person/None/None

COVERAGE
Newfoundland

PERIOD OF RECORD/UPDATE FREQUENCY
1985-present/Annual

FORMAT
Current research — some tables on computer (work in progress — not in print yet) — raw data available

DATA TYPE/PARAMETERS MEASURED
Biological/vegetation, site types, cutting stages, tree counts, growth assessment

SAMPLING PROCEDURES
Vegetation plots — cover abundance scale

PROGRAM TYPE
Research

COMMENTS

TITLE
Fish and Wildlife Surveys Within National Parks

CONTACT
Gary Corbett, Environment Canada, Canadian Parks Service, Historic Properties, Upper Water Street, Halifax, N.S., B3J 1S9, (902) 426-3432

PURPOSE
To gather fish and wildlife information as indices of environmental quality

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
Atlantic Provinces — fish and wildlife resources within national parks

PERIOD OF RECORD/UPDATE FREQUENCY
1930s to present/Annually

FORMAT
All on hard copy, some computerized on IBM-PC compatible with several software packages — D Base III, Lotus 123, SPANS GIS system

DATA TYPE/PARAMETERS MEASURED
Biological/population and distribution of fish, birds, ungulates, reptiles and amphibians in national parks

SAMPLING PROCEDURES
Field observations, aerial surveys

PROGRAM TYPE
Monitoring and survey

COMMENTS
Ongoing monitoring and occasional surveys to help determine the health of park ecosystems. Types of studies include:

- *fish populations*
- *browse surveys*
- *track surveys in winter*
- *aerial ungulate surveys*
- *breeding birds*
- *rare or endangered species*
- *beach surveys*

Data is being computerized with existing land use data on SPANS Geographical Information System. This will allow the generation of computer maps to determine spatial distributions.

TITLE
Experimental Ecology Data (EXPEC)

CONTACT
L. Coady, Director, Science Branch, Department of Fisheries and Oceans, P.O. Box 5667, St. John's, Nfld., A1C 5X1 (709) 772-2027

PURPOSE
Studies on the different parameters that impact on the quality of the freshwater environment. This database also covers population estimates.

ACCESS/FEES/RESTRICTIONS
This database may be accessed through the above-mentioned contact person and Restrictions and Fees are as per the "Science Branch's Guidelines for the Use of Data (August 1988)".

COVERAGE
Newfoundland and Labrador inland waters.

PERIOD OF RECORD/UPDATE FREQUENCY
The period of record ranges from the late 1940s to present. The update frequency could be daily, weekly, monthly or yearly depending on area.

FORMAT
This information is stored as computerized data. Hard copies of some datasets are available.

DATA TYPE/PARAMETERS MEASURED
Physical/stream discharge hydrology, counting fence data, habitat management stream IFIM data
Chemical/mercury data, acid rain data, water quality
Biological/salmon tag recaptures

SAMPLING PROCEDURES
The sampling procedures used are specific to the type of research being conducted. Information on sampling procedures would have to be dealt with individually.

PROGRAM TYPE
Research and monitoring

COMMENTS

TITLE
Freshwater and Anadromous Data (FAFP)

CONTACT
L. Coady, Director, Science Branch, Department of Fisheries and Oceans, P.O. Box 5667, St. John's, Nfld., A1C 5X1, (709) 772-2027

PURPOSE
The purpose of this database is to provide advice to regional, national and international fisheries managers on commercially and recreationally important freshwater and anadromous fisheries in the Newfoundland Region.

ACCESS/FEES/RESTRICTIONS
This database may be accessed through the above-mentioned contact person and Restrictions and Fees are as per the "Science Branch's Guidelines for the Use of Data (August 1988)".

COVERAGE
Includes (a) stocks originating in Newfoundland-Labrador lakes and rivers, (b) stocks originating in rivers of other provinces and caught in the commercial fisheries in Newfoundland and in West Greenland.

PERIOD OF RECORD/UPDATE FREQUENCY
The period of record ranges from the late 1940s to present. The update frequency could be daily, weekly, monthly or yearly depending on area.

FORMAT
This information is stored as computerized data.

DATA TYPE/PARAMETERS MEASURED
Chemical/water quality data
Biological /salmon – sampling and tagging data; maturity/fecundity; food and feeding data; salmon landings; scale measurements; length and weights stream tagging data; counting fence and fishway data; fry release data;
/char – morphology merestics, landings in Labrador, river sampling, length and frequencies, tagging data, feeding data, otolith data;
/other – creel census, experimental ponds data, stickleback data, zooplankton biomass

SAMPLING PROCEDURES
The sampling procedures used are specific to the type of research being conducted. Information on sampling procedures would have to be dealt with individually.

PROGRAM TYPE
Research and monitoring

COMMENTS

TITLE
Foreign Cooperative Research (FCR)

CONTACT
L. Coady, Director, Science Branch, Department of Fisheries and Oceans, P.O. Box 5667, St. John's, Nfld., A1C 5X1, (709) 772-2027

PURPOSE
Fisheries research

ACCESS/FEES/RESTRICTIONS
This database may be accessed through the above-mentioned contact person and Restrictions and Fees are as per the "Science Branch's Guidelines for the Use of Data (August 1988)".

COVERAGE
Newfoundland and Labrador marine waters.

PERIOD OF RECORD/UPDATE FREQUENCY
The period of record ranges from the late 1940s to present/The update frequency could be daily, weekly, monthly or yearly depending on area.

FORMAT
This information is stored as computerized data.

DATA TYPE/PARAMETERS MEASURED
Biological/set details 1978-1987, halibut length-frequencies and age/growth; historical age and growth; conversion factor data; large pelagic data; blue hake length-frequencies, meristics and morphometrics; zooplankton data

SAMPLING PROCEDURES
The sampling procedures used are specific to the type of research being conducted. Information on sampling procedures would have to be dealt with individually.

PROGRAM TYPE
Research and monitoring

COMMENTS

TITLE
Groundfish Data (GFISH)

CONTACT
L. Coady, Director, Science Branch, Department of Fisheries and Oceans, P.O. Box 5667, St. John's, Nfld., A1C 5X1, (709) 772-2027

PURPOSE
Groundfish researchers provide biological advice to national and international fisheries managers on the management of commercially and potentially commercially important species of Newfoundland and Labrador.

ACCESS/FEES/RESTRICTIONS
This database may be accessed through the above-mentioned contact person/ Restrictions and Fees are as per the "Science Branch's Guidelines for the Use of Data (August 1988)".

COVERAGE
Newfoundland and Labrador

PERIOD OF RECORD/UPDATE FREQUENCY
The period of record ranges from the late 1940s to present/The update frequency could be daily, weekly, monthly or yearly depending on area

FORMAT
This information is stored as computerized data. Hard copies of some datasets are normally not available.

DATA TYPE/PARAMETERS MEASURED
Biological/cod – age and growth data; length-frequencies, weight analysis, tagging data, length-sex-maturity, inshore catch effort, meristics, morphometrics, otolith data, food/feeding, parasites, surveys, oogenesis similar data has been accured on rock cod, haddock, plaice, yellowtail and witch flounder, turbot, halibut, grenadier and skate

SAMPLING PROCEDURES
The sampling procedures used are specific to the type of research being conducted. Information on sampling procedures would have to be dealt with individually.

PROGRAM TYPE
Research and surveys

COMMENTS

TITLE
Invertebrate Data (INVRT)

CONTACT
L. Coady, Director, Science Branch, Department of Fisheries and Oceans, P.O. Box 5667, St. John's, Nfld., A1C 5X1, (709) 772-2027

PURPOSE
The purpose of this database is to provide reliable real-time biological advice to national and international fisheries managers on the management of important shellfish species in the marine environment.

ACCESS/FEES/RESTRICTIONS
This database may be accessed through the above-mentioned contact person and Restrictions and Fees are as per the "Science Branch's Guidelines for the Use of Data (August 1988)".

COVERAGE
Newfoundland and Labrador marine waters.

PERIOD OF RECORD/UPDATE FREQUENCY
The period of record ranges from the late 1940s to present. The update frequency could be daily, weekly, monthly or yearly depending on area.

FORMAT
This information is stored as computerized data.

DATA TYPE/PARAMETERS MEASURED
Biological/tagging and recapture data, length frequency data, shrimp logs, crab measurements and tagging, squid catch records and catch-effort data, squid length-weight-sex data, octopus parameters, scallop sample frequencies, scallop port sampling and meat weights

SAMPLING PROCEDURES
The sampling procedures used are specific to the type of research being conducted. Information on sampling procedures would have to be dealt with individually.

PROGRAM TYPE
Research

COMMENTS

TITLE
Oceanography Data (OCEAN)

CONTACT
L. Coady, Director, Science Branch, Department of Fisheries and Oceans, P.O. Box 5667, St. John's, Nfld., A1C 5X1, (709) 772-2027

PURPOSE
The purpose of this database is to conduct studies relating to linkages between physical oceanography, ocean climate and fish movement and to provide charts for the coastal waters of Newfoundland.

ACCESS/FEES/RESTRICTIONS
This database may be accessed through the above-mentioned contact person and Restrictions and Fees are as per the "Science Branch's Guidelines for the Use of Data (August 1988)".

COVERAGE
Newfoundland and Labrador marine waters.

PERIOD OF RECORD/UPDATE FREQUENCY
The period of record ranges from the late 1940s to present. The update frequency could be daily, weekly, monthly or yearly depending on area.

FORMAT
This information is stored as computerized data.

DATA TYPE/PARAMETERS MEASURED
Physical/hydrographic, temperature
Chemical/chlorophyll and nutrient, fluorescence
Biological/plankton sorting and identification, redfish larval measurements, morphometric/gut analysis

SAMPLING PROCEDURES
The sampling procedures used are specific to the type of research being conducted. Information on sampling procedures would have to be dealt with individually.

PROGRAM TYPE
Research and surveys

COMMENTS

TITLE
Pelagic Data (PELAG)

CONTACT
L. Coady, Director, Science Branch, Department of Fisheries and Oceans, P.O. Box 5667, St. John's, Nfld., A1C 5X1, (709) 772-2027

PURPOSE
The purpose of this database is to provide reliable real-time biological advice to national and international fisheries managers on the management of important pelagic species in the marine environment.

ACCESS/FEES/RESTRICTIONS
This database may be accessed through the above-mentioned contact person and Restrictions and Fees are as per the "Science Branch's Guidelines for the Use of Data (August 1988)".

COVERAGE
Newfoundland and Labrador marine waters.

PERIOD OF RECORD/UPDATE FREQUENCY
The period of record ranges from the late 1940s to present. The update frequency could be daily, weekly, monthly or yearly depending on area.

FORMAT
This information is stored as computerized data.

DATA TYPE/PARAMETERS MEASURED
Biological /capelin – tagging and recapture, length, sex, maturity and meristics, logbook-search time,
/herring – Samples by area, tagging and recapture, length, sex, maturity and age-frequency, landings and plant turnouts, acoustic school size
/other – plankton larval and egg study, plankton oceanographic data and size fractions, herring, mackeral and sand launce samples

SAMPLING PROCEDURES
The sampling procedures used are specific to the type of research being conducted. Information on sampling procedures would have to be dealt with individually.

PROGRAM TYPE
Research and surveys

COMMENTS

TITLE
National Harvest Surveys

CONTACT
Hélène Levèsque, Canadian Wildlife Service, Environment Canada, National Wildlife Research Centre, 100 Gamelin Blvd., Hull, Quebec, K1A 0H3, (819) 953-1426

PURPOSE
Annual harvest surveys used to determine harvest limits for the following year, data also used to determine game bird population trends

ACCESS/FEES/RESTRICTIONS
Through contact person/May involve a cost recovery fee/Names of survey respondents is confidential

COVERAGE
Canada – including the 4 Atlantic Provinces

PERIOD OF RECORD/UPDATE FREQUENCY
1967 to present/Annual

FORMAT
Hard copy – annual publication and files of historical records Digital – IBM mainframe

DATA TYPE/PARAMETERS MEASURED
Biological/total and estimates kill of game birds within Canada and areas within provinces, hunter recreation days, favorite areas, species, sex and age ratio of hunted birds

SAMPLING PROCEDURES
Mailed surveys

PROGRAM TYPE
Monitoring, survey, data also used for research purposes

COMMENTS
Data available on 9-track tape or floppy disk.
There are 2 parts to the data base:
- *a questionnaire sent to hunters at the end of each season;*
- *species composition survey – one wing from every duck killed or tail feathers from every goose sent to CWS to determine species, age and sex of each bird.*

TITLE
Breeding Bird Survey

CONTACT
Connie Downs, Canadian Wildlife Service, Environment Canada, National Wildlife Research Centre, 100 Gamelin Blvd., Hull, Quebec, K1A 0H3, (819) 997-4213

PURPOSE
To provide information on population trends of songbirds

ACCESS/FEES/RESTRICTIONS
Through contact person/May involve cost recovery fee/No restrictions

COVERAGE
North America — including the Atlantic Provinces

PERIOD OF RECORD/UPDATE FREQUENCY
1966 to present/Annual

FORMAT
Hard copy and digital — IBM mainframe computer

DATA TYPE/PARAMETERS MEASURED
Biological/counts of breeding birds seen or heard

SAMPLING PROCEDURES
Field surveys — car driven transects by volunteers

PROGRAM TYPE
Research, monitoring, survey

COMMENTS
The Canadian part of this data base was initiated in the Maritime Provinces. Data available on 9-track tape or floppy disk.

TITLE
Bird Banding and Recovery Data Base

CONTACT
Connie Downs, Canadian Wildlife Service, Environment Canada, National Wildlife Research Centre, 100 Gamelin Blvd., Hull, Quebec, K1A 0H3, (819) 997-4213

PURPOSE
To document the location and movement of birds

ACCESS/FEES/RESTRICTIONS
Through contact person/May involve a cost recovery fee/Person who did the banding has first publication rights — restriction for endangered or protected species

COVERAGE
Canada, United States, Mexico, Carribean — including Atlantic Canada

PERIOD OF RECORD/UPDATE FREQUENCY
Since 1908 for recoveries
1950s to present/Annual, (October)

FORMAT
Hard copy — published reports; Digital — IBM mainframe

DATA TYPE/PARAMETERS MEASURED
Biological/species of birds, locations of banding and recovery, attributes of birds

SAMPLING PROCEDURES
Banding and recovery of banded birds

PROGRAM TYPE
Research, monitoring, survey

COMMENTS
Data present by degree or 10-minute squares.
Can provide data requests on 9-track tapes and floppy disks.

TITLE
FMG Atlas and Geographic Information System

CONTACT
Peter J. Ricketts, School for Resource & Environmental Studies (SRES), Dalhousie University, 1312 Robie Street, Halifax, N.S., B3H 3E2, (902) 424-3632

PURPOSE
To provide a regional digital compilation of environmental and resource data and information in an accessible geographical format

ACCESS/FEES/RESTRICTIONS
Through contact person/Costs yet to be determined/Some raw data may be proprietary information

COVERAGE
Nova Scotia and New Brunswick – Bay of Fundy, Gulf of Maine, Georges Bank and the southern Scotian Shelf. Includes coastal areas from Halifax, N.S. to Newport, R.I.

PERIOD OF RECORD/UPDATE FREQUENCY
Primarily 1978 to present, although some historic data/Project on-going

FORMAT
Digital – CARIS GIS system, INGRIS data base, some data on IBM-PC (Lotus 123); PC accessible through GEOMATE software package; a hard copy atlas will be produced

DATA TYPE/PARAMETERS MEASURED
Physical/geology, oceanography, physiography
Chemical/focus is on mercury, lead, cadmium, PCB, DDT, oil and grease, dissolved oxygen, pH, nitrogen and phosphorous in coastal waters, estuaries, rivers and coastal sediments
Biological/productivity and resource distributions
Socio-economic/population, economic activity and infrastructure

SAMPLING PROCEDURES
Compilation of existing information, data and databases.

PROGRAM TYPE
Research, survey, mapping

COMMENTS
Data base also includes information on fish, seabird, and whale distribution, sensitive areas, protected areas, dump sites (land and sea), acid rain sensitivity, oil spills, population distribution, coastal development, shellfish closures, political boundaries, oceanography and geology.
Final GIS and hard copy atlas should be completed in 1990.
Funding agencies will also have access to the data base upon completion (e.g. Environment Canada, Council of Maritime Premiers, Fisheries and Oceans Canada, Texaco Ltd.).
System will be able to overlay different environmental features to help in researching relationships between resource distribution and environmental pollution.
Digitization and development of GEOMATE software is being undertaken by LRIS (Land Registration Information Service) at Amherst, N.S.

TITLE
Acid Rain (Wet Deposition and Aerosol Sulphate Monitoring Network)

CONTACT
Bill Moores, Conservation and Protection, Environment Canada, Queen Square, Dartmouth, N.S., B2Y 2N6, (902) 426-2004

PURPOSE
To accumulate data for acid rain research

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
Atlantic Region

PERIOD OF RECORD/UPDATE FREQUENCY
1979 to 1987/Intermittent, as available samples are analyzed

FORMAT
Hard copy; Digital

DATA TYPE/PARAMETERS MEASURED
Chemical/sulphate, chloride, nitrate, pH, magnesium, sulphuric acid, calcium, potassium

SAMPLING PROCEDURES
Event samplers

PROGRAM TYPE
Monitoring, research

COMMENTS
Program stopped March 1987.
Information on data from some stations were used for acid rain research.

TITLE
Geotechnical Data Base

CONTACT
Harold Christian, Kate Moran, Energy, Mines and Resources Canada, Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, N.S., B2Y 4A2, (902) 426-3932 — (902) 426-8159

PURPOSE
Information to research the engineering properties of marine sediments

ACCESS/FEES/RESTRICTIONS
Through contact person/Variable, small requests free of charge, costs negotiable on an individual basis for larger requests/No restrictions

COVERAGE
Atlantic Provinces — nearshore and offshore areas
Labrador shelf and Arctic Island Channels

PERIOD OF RECORD/UPDATE FREQUENCY
1985 to present/Variable — as surveys come in

FORMAT
Digital — IBM PC micro-computer, D Base III

DATA TYPE/PARAMETERS MEASURED
Physical/geotechnical parameters related to sediment grain size, density, strength, and compressibility

SAMPLING PROCEDURES
Piston cores and borehole samples

PROGRAM TYPE
Research, monitoring, survey

COMMENTS

TITLE
Groundwater Monitoring Network

CONTACT
Creighton Brisco, Nova Scotia Department of the Environment, P.O. Box 2107, Halifax, N.S., B3J 3B7, (902) 424-5300

PURPOSE
To monitor provincial sites for water level statistics, especially during extreme conditions

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
Nova Scotia – groundwater

PERIOD OF RECORD/UPDATE FREQUENCY
1960s to present/Monthly

FORMAT
Hard copy and Digital – IBM PC AT, D Base III Plus and FOX BASE software; 1979 to 1988 on computer

DATA TYPE/PARAMETERS MEASURED
Physical/groundwater levels – monthly average maximum, monthly average minimum, maximum to date, minimum to date

SAMPLING PROCEDURES
Samples from various sites located throughout the province

PROGRAM TYPE
Monitoring

COMMENTS

TITLE
Air Quality Telemetry

CONTACT
Jane MacNeil, Nova Scotia Department of the Environment, P.O. Box 2107, Halifax, N.S., B3J 3B7, (902) 424-5300

PURPOSE
To gather air quality data and measure pollutants for national and provincial networks to indicate annual trends and provide monthly summaries

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
Nova Scotia

PERIOD OF RECORD/UPDATE FREQUENCY
1970s to present/1988 forward is computerized/Monthly

FORMAT
Hard copy and digital — IBM PC AT computer, D Base III Plus and FOX BASE software

DATA TYPE/PARAMETERS MEASURED
Chemical/ozone, hydrogen sulphide, nitric oxides, sulphur dioxide, carbon monoxide, total suspended particulates

SAMPLING PROCEDURES
Continual measurements and reporting of one hour averages for specific sites located throughout the Province

PROGRAM TYPE
Monitoring

COMMENTS

TITLE
Environmental Contaminants in Seabirds

CONTACT
Peter Pearce, Canadian Wildlife Service, Environment Canada, P.O. Box 400, Fredericton, N.B., E3B 4Z9, (506) 452-3086

PURPOSE
To monitor trends in contaminant concentrations in seabirds and to determine threats to the health of seabirds.

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/Requests will be screened by the originator of the data.

COVERAGE
Atlantic Provinces — seabird colonies in coastal areas and offshore islands

PERIOD OF RECORD/UPDATE FREQUENCY
1968 to present/Every 4 years.

FORMAT
Digital

DATA TYPE/PARAMETERS MEASURED
Chemical/DDT, PCB and other organohalogen compounds.

SAMPLING PROCEDURES
Egg collection from Atlantic Puffin, Leach's Storm-Petrel, Double Crested Cormorant and occasionally Herring Gulls

PROGRAM TYPE
Monitoring

COMMENTS
Good indicator of trends in space and time of levels of organic contaminants in the environment.

TITLE
Impacts of Pesticides on Songbirds

CONTACT
Peter Pearce and Dan Busby, Canadian Wildlife Service, Environment Canada, P.O. Box 400, Fredericton, N.B., E3B 4Z9, (506) 452-3086

PURPOSE
To research the impact of forest spray on songbirds

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
New Brunswick and Newfoundland

PERIOD OF RECORD/UPDATE FREQUENCY
1977 to present/Most summers

FORMAT
Hard copy – data files and reports

DATA TYPE/PARAMETERS MEASURED
Biological (biochemical)/brain acetyl cholinesterase, reproductive success, growth rate of chicks

SAMPLING PROCEDURES
Birds are shot and collected – species of interest include White-Throated Sparrow, Bay-Breasted Warbler, Magnolia Warbler, and Tennessee Warbler

PROGRAM TYPE
Research

COMMENTS

TITLE
Groundwater Levels

CONTACT
Mike Sprague, New Brunswick Department of Environment, Water Resource Planning and Sciences Branch, P.O. Box 6000, Fredericton, N.B., E3B 5H1, (506) 453-2353

PURPOSE
To measure fluctuations in groundwater levels at selected sites in New Brunswick

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/No restrictions

COVERAGE
New Brunswick

PERIOD OF RECORD/UPDATE FREQUENCY
Most recent information/Monthly

FORMAT
Hard copy

DATA TYPE/PARAMETERS MEASURED
Physical/water level information – depth below ground level

SAMPLING PROCEDURES
N/A

PROGRAM TYPE
Monitoring

COMMENTS

TITLE
Well Driller Reports

CONTACT
John Cann, New Brunswick Department of Environment, Operations Branch, Water and Wastewater Section, P.O. Box 6000, Fredericton, N.B., E3B 5H1, (506) 453-2861

PURPOSE
To maintain a register of drilled wells in New Brunswick

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/No restrictions

COVERAGE
New Brunswick

PERIOD OF RECORD/UPDATE FREQUENCY
1976 to present/Continuous

FORMAT
Hard copy – microfiche, Digital

DATA TYPE/PARAMETERS MEASURED
Physical/well location, yield, depth, well log

SAMPLING PROCEDURES
Data obtained from well drillers reports

PROGRAM TYPE
Monitoring

COMMENTS

TITLE
NAQUADAT (National Water Quality Data Bank)

CONTACT
Tom Pollock, Inland Waters Directorate, Environment Canada, Federal Building, Main Street, Moncton, N.B., E1C 8N6, (506) 857-6606

PURPOSE
To maintain an inventory of ambient water quality across Canada

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
Canada – including fresh, estuarine and marine waters

PERIOD OF RECORD/UPDATE FREQUENCY
1960 to present/Variable, but frequent

FORMAT
Hard copy annual summary reports; Digital – CDC CYBER mainframe computer – Ottawa

DATA TYPE/PARAMETERS MEASURED
Physical/flow, water depth
Chemical/approximately 150 water quality parameters including nutrients, metals, pesticides and other organic contaminants

SAMPLING PROCEDURES
Variable, but the majority are grab samples from surface water – some automatic water quality samples and a small number of composite samples

PROGRAM TYPE
Monitoring, with some research and survey data

COMMENTS
NAQUADAT is in the process of changing from System 2000 to Oracle.
Good source of baseline water quality data.
Most extensive water quality data base in Canada.
Several federal and provincial government agencies contribute data to NAQUADAT.

TITLE
International Waters

CONTACT
Tom Pollock, Environment Canada, Inland Waters, Federal Building, Main Street, Moncton, N.B., E1C 8N6, (506) 857-6606

PURPOSE
To determine ambient water quality and temporal trends

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
New Brunswick — Saint John and St. Croix Rivers

PERIOD OF RECORD/UPDATE FREQUENCY
1965 to present/Intermittent depending on incoming data

FORMAT
Digital — VAX 750 computer — Various media, mag tape, diskette, hard copy, ASCIC or binary

DATA TYPE/PARAMETERS MEASURED
Physical/
Chemical/
Biological/major ions, nutrients, metals, organics including pesticides (water, sediments, fish)

SAMPLING PROCEDURES
Grab samples

PROGRAM TYPE
Monitoring and survey

COMMENTS

TITLE
Forest Insect and Disease Survey Infobase

CONTACT
M. Power, PNFI, Canadian Forestry Service, Chalk River, Ontario, K0J 1J0, (613) 589-2800; L. Magasi, Agriculture Canada, Canadian Forestry Service, Maritimes Office, P.O. Box 4000, Fredericton, N.B., E3B 5P7, (506) 452-3561; J. Hudak, Canadian Forestry Service, Newfoundland Forestry Service, P.O. Box 6028, St. John's, Newfoundland, A1C 5X8, (709) 772-6019

PURPOSE
To manage data for the forest insect and disease survey and to research impact of acid rain on forests

ACCESS/FEES/RESTRICTIONS
Through contact persons/Costs to be determined/Data has to be manipulated before it can be released

COVERAGE
Canada – including the 4 Atlantic Provinces

PERIOD OF RECORD/UPDATE FREQUENCY
Late 1930s to present/Continuous

FORMAT
Hard copy maps illustrating the location of infestations; Digital – VAX 750, INGRES data base, ARCINFO GIS

DATA TYPE/PARAMETERS MEASURED
Physical/elevation and aspect, some geomorphology
Chemical/pH, major ions, metals – for acid rain plots only
Biological/distribution of disease and insect pests

SAMPLING PROCEDURES
Field surveys

PROGRAM TYPE
Research, monitoring, survey

COMMENTS
Survey database contains 700,000 records. Map database is in preparation.
Data base also includes a catalogue of 20,000 insects and diseases.
ARNEWS – Acid Rain National Early Warning System data base incuded in the system: 110 (10 x 40 m) plots scattered across Canada. Data for each plot include the intensive measurements of each tree and soil and foliage smaples from adjacent areas. Every plot is re-measured each year to attempt to determine initial effects of acid rain.
In the Maritimes only, timber impact plot data is retained in the database.

TITLE
Climatological and Hydrometric Data

CONTACT
Bill Hart, Technical University of Nova Scotia, Centre for Water Resources and Civil Engineering, P.O. Box 1000, Halifax, N.S., B3J 2X4, (902) 429-8300

PURPOSE
Data to support the Halifax Urban Watersheds Program

ACCESS/FEES/RESTRICTIONS
Through contact person/A fee may be charged/Limited restrictions

COVERAGE
Nova Scotia — Metropolitan Halifax area

PERIOD OF RECORD/UPDATE FREQUENCY
1981 to present/3 times a week

FORMAT
Hard copy and digital

DATA TYPE/PARAMETERS MEASURED
Physical/temperature, evaporation, precipitation, snowfall, winds, stream flow, lake level/storage

SAMPLING PROCEDURES
Manual/automatic hydrometric and meteorological stations

PROGRAM TYPE
Research, monitoring, survey

COMMENTS

TITLE
Marine Climatological Data – Hydrometeorology and Marine Division, Canadian Climate Centre

CONTACT
W. Richards, AES, Environment Canada, 1496 Bedford Highway, Bedford, N.S., B4A 1E5, (902) 426-9135

PURPOSE
To provide a capability for easy and rapid analysis of marine climate and ice data in a form appropriate for decision makers in industry or government

ACCESS/FEES/RESTRICTIONS
Through contact persons/Variable, depending on nature and size of the request/No restrictions

COVERAGE
Offshore and coastal areas of Canada, including the Atlantic Canada offshore

PERIOD OF RECORD/UPDATE FREQUENCY
Depends on each individual data set, some start in the early 1800s/Variable, depending on data set

FORMAT
Digital – IBM mainframe, data stored on tape

DATA TYPE/PARAMETERS MEASURED
Physical/waves, winds, ice cover, air and water temperature, air pressure, storm tracks, present weather codes

SAMPLING PROCEDURES
Estimated or observed data, measured data from rigs, some data based on models

PROGRAM TYPE
Research, monitoring, survey

COMMENTS
This is a series of marine climate and ice data bases which can be accessed through the following systems:

- MAST – for tabular and graphical summaries of marine and coastal station meteorological reports
- CONAN – for contour analysis of marine climate parameters and derived statistics
- DUST – for persistence and extreme value analysis as well as time series plots
- SPASM – for detailed climatological analysis of surface pressure data
- CRISP – for tabular, graphical and contour plot summaries of sea ice, snow cover and degree-day information

TITLE
Data Holdings – Marine Chemistry Division, DFO

CONTACT
Dr. J.M. Bewers, Marine Chemistry Division, Fisheries Oceans Canada, Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, N.S., B2Y 4A2, (902) 426-2371

PURPOSE
To maintain data collected by the Marine Chemistry Division

ACCESS/FEES/RESTRICTIONS
Through contact person/May be a fee for larger requests/ May be restrictions on unverified or uninterpreted data

COVERAGE
Atlantic Provinces – offshore and coastal areas including the region from George's Bank to the Labrador Shelf

PERIOD OF RECORD/UPDATE FREQUENCY
1970 to present/Variable

FORMAT
Hard copy – reports, publications and files; Digital – CDC CYBER mainframe computer

DATA TYPE/PARAMETERS MEASURED
Physical/dissolved oxygen, salinity, temperature
Chemical/trace metals, PCB, radio-nuclides, organic matter, petroleum hydrocarbons, nutrients

SAMPLING PROCEDURES
Oceanographic Cruises – water column samplers, grab samplers

PROGRAM TYPE
Research, monitoring, survey

COMMENTS
Good baseline data for offshore areas.
Radionuclide data collected near the Pt. Lepreau Nuclear Power Station. Contaminant investigations at selected industrial sites.

TITLE
Aquaculture Zoning System

CONTACT
Dale Small, Fisheries Oceans Canada, Ellerslie Fisheries Station, Ellerslie, P.E.I., C0B 1Z0, (902) 831-2933

PURPOSE
To locate aquaculture leases in Prince Edward Island and to prevent conflicts with other users of estuaries and coastal waters

ACCESS/FEES/RESTRICTIONS
Through contact person/Variable, depending on the size of the request/No restrictions

COVERAGE
Prince Edward Island — coastal waters and estuaries

PERIOD OF RECORD/UPDATE FREQUENCY
1930s to present/Daily

FORMAT
Hard copy — Orthophoto maps

DATA TYPE/PARAMETERS MEASURED
Physical/location of aquaculture bases

SAMPLING PROCEDURES
Information obtained from permits and lease applications

PROGRAM TYPE
Survey

COMMENTS
The data base consists of 210, 1:10,000 scale charts.

TITLE
Maritime Wetlands Inventory

CONTACT
Al Smith, Canadian Wildlife Service, Environment Canada, Atlantic Regional Office, Sackville, N.B., E0A 3C0, (506) 536-3025

PURPOSE
The recognization and protection of wetlands, both freshwater and marine

ACCESS/FEES/RESTRICTIONS
Through contact person/No cost for computer printout, but ozalid printed hard copy provincial atlases cost approximately N.B. $500.00, N.S. $300.00, P.E.I. $75.00/No restrictions

COVERAGE
Nova Scotia, New Brunswick, Prince Edward Island

PERIOD OF RECORD/UPDATE FREQUENCY
1970 to 1985/Mapping completed – electronic data compilation completed and intermittently updated

FORMAT
Hard copy atlas, 1:50,000 scale, base maps 1:25,000
Digital – IBM-PC AT computer, D Base III software

DATA TYPE/PARAMETERS MEASURED
Physical/location, watershed identification, area
Chemical/pH, conductivity
Biological/type and class of vegetation, dominant vegetation, interspersion, evaluation score

SAMPLING PROCEDURES
Air photo interpretation and field checks

PROGRAM TYPE
Research, monitoring, survey.

COMMENTS
Only wetlands greater than 0.25 hectare are identified.

TITLE
Maritimes Nest Records Scheme

CONTACT
Al Smith, Canadian Wildlife Service, Environment Canada, Atlantic Region Headquarters, Sackville, N.B., E0A 3C0, (506) 536-3025

PURPOSE
To provide a data bank for bird nesting research in the Maritime Provinces for researchers studying the breeding biology of birds

ACCESS/FEES/RESTRICTONS
Through contact person/No charge/Cards on 3 week loan

COVERAGE
New Brunswick, Nova Scotia, Prince Edward Island

PERIOD OF RECORD/UPDATE FREQUENCY
1960 to present/Annual

FORMAT
Hard copy – one record card per nest or nesting colony

DATA TYPE/PARAMETERS MEASURED
Biological/species, geographical location, habitat, nest description, success of hatch, number of eggs and young.

SAMPLING PROCEDURES
On-site inspections by volunteers.

PROGRAM TYPE
Research, survey

COMMENTS
1,600 cards/year are added to the data base which totals close to 35,000 cards.

TITLE
Oceanbase

CONTACT
K.L. Tay, Conservation and Protection, Environment Canada, Dartmouth, N.S., B2Y 2N6, (902) 426-4744

PURPOSE
To maintain data in support of the Ocean Dumping Permit and Review System

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
Atlantic Provinces — ocean dumping and aquaculture information for harbours throughout the region

PERIOD OF RECORD/UPDATE FREQUENCY
1976 to present/Daily

FORMAT
Paradox DBMS package (microcomputer)

DATA TYPE/PARAMETERS MEASURED
Physical/sediment grain size
Chemical/carbon, oil and grease, cadmium, mercury, lead, zinc, copper, PCB, DDT, and PAH in sediments
Socio-economic/locations of dredging and dumping operations, location and description of aquaculture leases
Record/status of Ocean Dumping Permit Applications; status of dumping operations

SAMPLING PROCEDURES
Sediment core and grab samples analyzed by private labs according to approved methods

PROGRAM TYPE
Monitoring and survey data

COMMENTS
Quality control program and routine analysis of reference and blind samples ensures high quality data.
System can perform a variety of data retrievals.
Some capability for graphics and statistical analysis.
Good data set on contaminant concentrations in sediments from harbours throughout Atlantic Canada.
Other parameters including, sodium, chloride and arsenic may be analyzed for unusual dumping operations.

TITLE
ODUMP (Ocean Dumping Data Base) **No Longer Exists (see Ref. 87)**

CONTACT
K.L. Tay, Conservation and Protection, Environment Canada, Dartmouth, N.S., B2Y 2N6, (902) 426-4744

PURPOSE
To store ocean dumping permit information, and to register ocean dumping permit applications

ACCESS/FEES/RESTRICTIONS
Through contact person/A fee may be charged/None

COVERAGE
Canada — includes coastal harbours in the 4 Atlantic Provinces

PERIOD OF RECORD/UPDATE FREQUENCY
1976 to present/Variable

FORMAT
Hard copy — annual summary report; digital — System 2000 data base

DATA TYPE/PARAMETERS MEASURED
Physical/sediment grain size, location of dredge and dump sites, volume to be dumped, timing of the operation.
Chemical/carbon, oil and grease, cadmium, mercury, lead, zinc, copper, PCB, DDT and PAH in sediments.
Record status of Ocean Dumping Permit applications, status of dumping operations

SAMPLING PROCEDURES
Core and grab samples analyzed by private labs according to approved methods

PROGRAM TYPE
Monitoring and survey

COMMENTS
Permit information is updated continuously, although chemical data is updated annually.
Need authorized password and user name to access System 2000; data retrievals must be carried out through contact person.
Regional OceanBase data base is more user friendly and contains more up-to-date information than ODUMP.

TITLE
National Registry of Toxic Chemical Residues

CONTACT
Richard Turle, Canadian Wildlife Service, Environment Canada, Ottawa, Ontario, K1A 0H7, (819) 997-1410

PURPOSE
To maintain an inventory of toxic chemical concentrations in wildlife for officials investigating the effects of environmental contaminants

ACCESS/FEES/RESTRICTIONS
Through contact person/No costs/Only restriction is data "on-hold" for an impending publication, which must have written permission from the originator to be released

COVERAGE
Canada – Concentration of toxic chemicals in wildlife sampled across Canada including the 4 Atlantic Provinces

PERIOD OF RECORD/UPDATE FREQUENCY
1963 to present/Continuous

FORMAT
SIRS system, CDC Cyber main frame computer, will be converting to Oracle in 1989/90

DATA TYPE/PARAMETERS MEASURED
Chemical/toxic constituents in birds and mammals, parameters include: organochlorine pesticides, PCBs, mercury, lead, cadmium, dioxins

SAMPLING PROCEDURES
Standardized according to CWS manuals; quality control procedures (blind in-house and standard reference samples)

PROGRAM TYPE
Research, monitoring, survey

COMMENTS
This data base is a repository for information on wildlife specimens analyzed for toxic chemicals by the Canadian Wildlife Service.
There is data on more than 30,000 specimens representing 327 species.
Approximately 1 month should be allowed for delivery of information after a request is made.
System will be converted to Oracle data base software, although hardware has yet to be determined. Information will also be backed-up on D Base before the change-over.

TITLE
Lake Chemistry Data Base

CONTACT
Andrew Cameron, Assessment Division, Nova Scotia Department of the Environment, P.O. Box 2107, Halifax, N.S., B3J 3B7, (902) 424-5300

PURPOSE
To accumulate baseline water quality data related to acid rain

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
Nova Scotia

PERIOD OF RECORD/UPDATE FREQUENCY
1973-1981 – sparse data set; 1981 to present – detailed chemical data/Annual

FORMAT
Digital – CDC CYBER Main Frame, Fortran

DATA TYPE/PARAMETERS MEASURED
Chemical/more than 20 parameters including total organic carbon, colour, pH, major ions, alkalinity, metals

SAMPLING PROCEDURES
Water samples taken in summer from a small boat

PROGRAM TYPE
Survey

COMMENTS
This data is also stored at the Canada Centre for Inland Waters at Burlington, Ontario, and on NAQUADAT.
Sampling has been carried out by provincial Lands and Forests personnel, although the work may be transferred to Nova Scotia Fisheries.
Additional information on fish and lake bathymetry is also collected and stored. These have yet to be computerized.

TITLE
Rain Chemistry Data Base

CONTACT
Jane MacNeil, Assessment Division, Nova Scotia Department of the Environment, P.O. Box 2107, Halifax, N.S., B3J 3B7, (902) 424-5300

PURPOSE
To maintain baseline rain chemistry data

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/Data requests will be considered on an individual basis

COVERAGE
Nova Scotia

PERIOD OF RECORD/UPDATE FREQUENCY
1977 to present/Annual

FORMAT
Hard copy and Digital – CDC CYBER, Fortran

DATA TYPE/PARAMETERS MEASURED
Chemical/conductivity, pH, nitrogen, sodium, chloride, cadmium, magnesium, alkalinity, sulphuric acid, nitric acid, sulphur, total organic carbon, acidity, metals

SAMPLING PROCEDURES
Samples collected weekly from 5 automated samplers located around the province

PROGRAM TYPE
Monitoring

COMMENTS
Data base has over 11,900 records which include over 3,000 precipitation samples.
Approximately 300 samples per year.
20 chemical tests per sample.

TITLE
Long Range Transport of Atmospheric Pollutants (LRTAP)

CONTACT
Tom Clair, Environment Canada, Inland Waters, 1075 Main St., Moncton, N.B., E1C 8N6, (506) 857-6606

PURPOSE
To determine temporal trends and resources at risk to acid rain

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
Atlantic Region

PERIOD OF RECORD/UPDATE FREQUENCY
1965 – present/Intermittent depending on incoming data

FORMAT
Digital Vax 750 computer; various media; mag tape diskette, hard copy, ASCII or Binary

DATA TYPE/PARAMETERS MEASURED
Physical/major ions, nutrient, metals
Chemical/
Biological/phytoplankton

SAMPLING PROCEDURES
Grab samples

PROGRAM TYPE
Monitoring and survey

COMMENTS

TITLE
Ducks Unlimited Project Information

CONTACT
John Waugh, Eastern Regional Manager, Ducks Unlimited Canada, P.O. Box 430, Amherst, N.S., B4H 3Z5, (902) 667-8726

PURPOSE
To maintain information in support of waterfowl habitat management

ACCESS/FEES/RESTRICTIONS
Through contact person/A fee may be charged for a large information search/Some restrictions to protect waterfowl areas

COVERAGE
Atlantic Provinces — salt and freshwater marshes at scattered locations throughout the region

PERIOD OF RECORD/UPDATE FREQUENCY
1960s to present/Waterfowl use is periodically updated

FORMAT
Hard copy and Digital — Twin IBM 4341 mainframe computer

DATA TYPE/PARAMETERS MEASURED
Physical/location of site, size, shoreline miles
Biological/waterfowl production (counts and broods), watershed and land use information also available but more difficult to access

SAMPLING PROCEDURES
Field surveys

PROGRAM TYPE
Survey

COMMENTS
Access can be achieved from Ducks Unlimited Canada's Amherst Office, although the computer data base is located in Winnipeg.

TITLE
Water Quality

CONTACT
Wes White, Fisheries and Oceans Canada, P.O. Box 550, Halifax, N.S., B3J 2S7, (902) 426-3576

PURPOSE
To maintain data from acid rain investigations

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
Nova Scotia – rivers draining to the Atlantic Coast (south shore and eastern shore)

PERIOD OF RECORD/UPDATE FREQUENCY
1981 to present/Annual

FORMAT
Hard copy and digital

DATA TYPE/PARAMETERS MEASURED
Chemical/field pH and temperature, lab pH, sodium, potassium, calcium, manganese, magnesium, hardness, aluminum, sulphate, chloride, ammonia, dissolved oxygen, carbon, acidity, arsenic, cadmium, copper, iron, nickel, lead, chromium, selenium, zinc, colour, conductivity

SAMPLING PROCEDURES
Standard field sampling methods

PROGRAM TYPE
Monitoring

COMMENTS
Information available from a variety of sources including the Inland Waters labs in Moncton and the pathology lab in Halifax.
Data on rivers acidified by acid rain.

TITLE
Environmental Monitoring of Salmonid Aquaculture in the West Iles region, Bay of Fundy

CONTACT
D.J. Wildish, Fisheries Oceans Canada, Biological Station, St. Andrews, N.B., E0G 2X0, (506) 529-8854

PURPOSE
To monitor the impacts of salmonid aquaculture in the Bay of Fundy and to produce a predictive model for the holding capacity of part of the area

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/The release of unverified raw data is restricted

COVERAGE
Bay of Fundy

PERIOD OF RECORD/UPDATE FREQUENCY
1985 to present/Every 1-2 years

FORMAT
Hard copy technical reports, peer reviewed publications

DATA TYPE/PARAMETERS MEASURED
Physical/
Chemical/plant nutrient data, salinity, temperature, dissolved oxygen, sediment redox potential, currents, tides
Biological/benthic macrofauna, species and density of phytoplankton, chlorophyl-a, ATP,

SAMPLING PROCEDURES
Standard field methods

PROGRAM TYPE
Research, monitoring

COMMENTS
Physical component of study just beginning.
Unpublished data will not be released to the general public until it has been verified, reviewed and later released in a technical report.

TITLE
Marine Environmental Data Service (MEDS)

CONTACT
Ron Wilson, Marine Environmental Data Service, Department of Fisheries and Oceans, 200 Kent St., Ottawa, Ontario, K1A 0EC, (613) 990-0264

PURPOSE
To archive oceanographic data for Canada; to exchange data with other countries and to satisfy requests from the public

ACCESS/FEES/RESTRICTIONS
Through contact person/Cost recovery policy depending on request/No restrictions

COVERAGE
National and international – including all marine waters off the Canadian Coast

PERIOD OF RECORD/UPDATE FREQUENCY
Early 1900s to present/Daily

FORMAT
Digital

DATA TYPE/PARAMETERS MEASURED
Physical/parameters and nutrients including wave data, tides, water levels, temperature, salinity, dissolved oxygen, currents

SAMPLING PROCEDURES
Standard field sampling procedures.

PROGRAM TYPE
Research, monitoring, survey

COMMENTS
Clear mandate to satisfy information requests from the public.

TITLE
Chemical and Bacteriological Analysis of Municipal Water Supplies

CONTACT
Peter Casey, Department of Health Fitness, P.O. Box 488, Halifax, N.S., B3J 2R8, (902) 424-4300

PURPOSE
To monitor the quality of municipal water supplies

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
Nova Scotia

PERIOD OF RECORD/UPDATE FREQUENCY
1973 to present/Annual

FORMAT
Hard copy – reports and data sheets; Digital – IBM-PC computer

DATA TYPE/PARAMETERS MEASURED
Chemical/complete chemical analysis including organic chemicals and metals
Biological/bacteria

SAMPLING PROCEDURES
Sampled by officials of the Nova Scotia Department of Health and Fitness according to approved methods.

PROGRAM TYPE
Monitoring

COMMENTS
Long term data used to determine trends in municipal water quality.

TITLE
Commercial Samples Data Base

CONTACT
K. Zwanenburg, Fisheries Oceans Canada, Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, N.S., B2Y 4A2, (902) 426-3310

PURPOSE
To estimate the abundance of fish

ACCESS/FEES/RESTRICTIONS
Through contact person/No charge/None

COVERAGE
Nova Scotia and New Brunswick – Bay of Fundy and Atlantic coast of Nova Scotia

PERIOD OF RECORD/UPDATE FREQUENCY
1948 to present/Weekly

FORMAT
Digital – HP 3000 computer in St. Andrews, N.B. for 3 most recent years of data. CDC CYBER at the Bedford Institute for archived data

DATA TYPE/PARAMETERS MEASURED
Biological/number of fish at certain sizes, weight, age, sex, species, length frequencies, condition landed, type of gear, landing port

SAMPLING PROCEDURES
Fish surveyed at landing port

PROGRAM TYPE
Monitoring

COMMENTS

TITLE
Stream Alteration Data Base

CONTACT
A. Ducharme, Department of Fisheries and Oceans, Biological Sciences Branch, P.O. Box 550, Halifax, N.S., B3J 2S7, (902) 426-3606

PURPOSE
To maintain a data base in support of stream alteration referrals in the Scotia-Fundy Region of the Department of Fisheries & Oceans (DFO)

ACCESS/FEES/RESTRICTIONS
Through contact person, or André Ducharme, DFO, (902) 426-5933/No charge/No restrictions

COVERAGE
Nova Scotia and New Brunswick — Drainage basins flowing into the Bay of Fundy, and the Atlantic coast of Nova Scotia

PERIOD OF RECORD/UPDATE FREQUENCY
1970 to present/Annual

FORMAT
Digital — HP 1000 (Image), HP 150 (Condor) IBM-PC.

DATA TYPE/PARAMETERS MEASURED
Physical/
Chemical/water quality data
Socio-economic/location and nature of the work, person responsible for the work

SAMPLING PROCEDURES
Information gathered from referrals and field investigations.

PROGRAM TYPE
Survey

COMMENTS
5,000 records each for New Brunswick and Nova Scotia.
Data base has been taken over by André Ducharme of the Habitat Management Division. Gulf Region (Prince Edward Island and eastern New Brunswick) on a separate data base since 1984.
Provides a good cross section of stream alterations in the Maritime Provinces.
The contact person, Walton Watt, also maintains a data base on freshwater acidity in the Maritimes. This data is available on NAQUADAT (see NAQUADAT data base description).

TITLE
NAPS (National Air Pollution Surveillance Network)

CONTACT
Bill Moores, Conservation and Protection, Environment Canada, Dartmouth, N.S., B2Y 2N6, (902) 426-6485

PURPOSE
To maintain continuous air quality data from major population centres

ACCESS/FEES/RESTRICTIONS
Through contact persons/No charge/None

COVERAGE
Canada — urban centres throughout Canada

PERIOD OF RECORD/UPDATE FREQUENCY
1974 to present/Monthly

FORMAT
Hard copy — printouts and annual/monthly summary reports; raw data is stored on magnetic tape at a commercial computer service bureau

DATA TYPE/PARAMETERS MEASURED
Chemical/continuous gaseous — sulfur dioxide, carbon monoxide, nitrogen dioxide, ozone and soiling index
/total suspended particulates — mass, lead, sulphate and nitrate
/inhalable particulate — coarse, fine fraction mass, sulphate, nitrate, lead and 40 additional elements

SAMPLING PROCEDURES
Continuous automatic samplers, except for manual sampling for total suspended particulates, lead, sulphate and nitrate

PROGRAM TYPE
Monitoring

COMMENTS
Major Environment Canada air quality monitoring program.

TITLE:
CAPMoN (Canadian Air and Precipitation Monitoring Network)

CONTACT:
Bill Sukloff, Environment Canada, Atmospheric Environment Service, 4905 Dufferin Street, Downsview, Ontario, M3H 5T4, (416) 739-4456

PURPOSE:
To measure on a regional scale, spatial and temporal variation and long-term trends in regional-scale precipitation and air chemistry

ACCESS/FEES/RESTRICTIONS:
Through contact person/No charge/None

COVERAGE:
Canada — land-based stations

PERIOD OF RECORD/UPDATE FREQUENCY:
1983 to present; data are also available covering the period 1977-1983 from the earlier CANSAP and APN networks/Annual

FORMAT:
Hard copy — annual report; National Advanced Systems AS9060 IBM compatible mainframe computer, M204 for data management, SAS for data analysis

DATA TYPE/PARAMETERS MEASURED:
Physical/precipitation amount and type, snowfall cover
Chemical/Precipitation concentrations — pH, sulphate, nitrate, ammonia, chloride, potassium, magnesium, sodium, calcium
/Air concentration — particulate sulphate, nitrate, chloride, ammonium, sodium, potassium, gaseous sulphur dioxide, nitric acid

SAMPLING PROCEDURES:
Daily (24 hour) measurements using automatic precipitation chemistry samplers, standard rain gauges, filter pack air monitoring samplers

PROGRAM TYPE:
Regional-scale monitoring

COMMENTS:
Information can be sent on magnetic tape or floppy disk.

TITLE:
National Park Biophysical Inventories Data Base

CONTACT:
Don Harris, Canadian Parks Service, Environment Canada, Historic Properties, Upper Water St., Halifax, Nova Scotia, B3J 1S8, (902) 426-3401

PURPOSE:
To record biophysical data for national park planning and management purposes, and to provide baseline data for monitoring purposes

ACCESS/FEES/RESTRICTIONS:
Through contact/May be cost of recovery fee/None

COVERAGE:
Atlantic Region National Parks:

Cape Breton Highlands	*Prince Edward Island*	*Fundy*
Kejimkujik	*Gros Morne*	*Kouchibouquac*
Fortress of Louisbourg		

PERIOD OF RECORD/UPDATE FREQUENCY:
Varies among Parks, data collection began in 1970s/Periodically updated

FORMAT:
Digital
- *SPANS Geographic Information System (GIS)*
- *Canadian Soil Information System (CANSIS)*
- *Canada Land Data System (CLDS)*

Hard copy various maps and reports

DATA TYPE/PARAMETERS MEASURED:
Biological/Vegetation cover, wildlife surveys
Physical/Soils, hydrology, geomorphlogical features

SAMPLING PROCEDURES:
Air photo analysis, ground truthing, biophysical surveys, literature reviews, resource studies

PROGRAM TYPE:
Monitoring/Survey/Research

COMMENTS:
Data available on:
- *Fish – habitat, catch statistics, pH data related to egg survival and development.*
- *Reptiles and Amphibians – population, distribution, genetic mapping in conjunction with Acadia University.*
- *Birds – species check list, breeding bird surveys, loon breeding success, piping plover management program.*
- *Mammals – deer population studies, racoon management program, browse surveys, marten re-introduction program.*
- *Invertebrates – joint study with the Canadian Forestry Service on spruce budworm and Gypsy moth.*
- *Water quality – lake coliform counts, water levels, lake productivity, acid rain studies since 1978, the impact of bog pH on streams, groundwater, coastal marine ecology study.*
- *Vegetation – species distribution, forest study plots.*
- *Archaeology and human history.*
- *Climate*

TITLE:
National Archive (Climate)

CONTACT:
Environment Canada, Canadian Climate Centre, Climate Services Division, 4905 Dufferin Street, Downsview, Ontario, M3H 5T4

PURPOSE:
To maintain an archive of marine, surface and upper air climate data for Canada

ACCESS/FEES/RESTRICTIONS:
Through contact/Price schedule applies/No restrictions

COVERAGE:
National and adjacent waters

PERIOD OF RECORD/UPDATE FREQUENCY:
1840 to present/Monthly

FORMAT:
Data are retained in digital, paper, and micrographic formats

DATA TYPE/PARAMETERS MEASURED:
Physical/Hourly weather, daily and monthly climate, ice, marine, etc.

SAMPLING PROCEDURES:
Information collected from individual monitoring stations

PROGRAM TYPE:
Monitoring

COMMENTS:
Requests for data should be directed to the Climate Services Division by fax to (416) 739-4521 or call (416) 739-4328 or (416) 739-4335 (digital)

TITLE:
BAPMoN (Background Air Pollution Monitoring Network)

CONTACT:
Dr. Marlene Phillips or Dr. Neil Trivett, Environment Canada, Atmospheric Environment Service, 4905 Dufferin St., Downsview, Ontario, M3H 5T4, (416) 739-4449 or (416) 739-4447

PURPOSE:
Measures greenhouse gases either continuously or weekly for the purpose of analyzing trends and predicting climatic impacts

ACCESS/FEES/RESTRICTIONS:
Through contact/None/None

COVERAGE:
West coast — Cape St. James
East Coast — Sable Island
High Arctic — Alert

PERIOD OF RECORD/UPDATE FREQUENCY:
1975 to present/Annually

FORMAT:
Digital — personal computer data stored on hard disk or diskette
Hard copy tables available

DATA TYPE/PARAMETERS MEASURED:
Chemical/Carbon dioxide levels

SAMPLING PROCEDURES:
Flask sampling, non-dispersive infrared, gas chromatography

PROGRAM TYPE:
Monitoring

COMMENTS:

TITLE:
Residual Discharge Inventory System (RDIS)

CONTACT:
Tony Kosteltz or Marc Deslaurier, Environment Canada, Environmental Protection, Ottawa, Ontario, K1A 0H3, (819) 953-1654, (819) 994-3069

PURPOSE:
To monitor emission rates of air contaminants for atmospheric modelling and policy making.

ACCESS/FEES/RESTRICTIONS:
Through contact person/None/Some plant specific data may be restricted

COVERAGE:
National, grid coverage of all provinces and territories

PERIOD OF RECORD/UPDATE FREQUENCY:
1985 (historical data if available on a different system)/5 years with annual revisions

FORMAT:
IBM-PC — dBase IV

DATA TYPE/PARAMETERS MEASURED:
Chemical/Sulphur dioxide, nitrogen oxides, carbon monoxide, total hydrocarbons, particulate matter, reactive volatile organic compounds, ammonia

SAMPLING PROCEDURES:
Data calculated based on plant permit data (provincial), transportation and fuel consumption data from Statistics Canada, production data from other sources, actual stack monitoring, and published emission rates.

PROGRAM TYPE:
Monitoring, survey

COMMENTS:
This data base provides the raw data that is summarized in the Compendium (Comp) data base. Air toxics will be added in 1991.

TITLE:
Compendium (comp)

CONTACT:
Ron Solman or Tom Furmanczyk, Environment Canada, Environmental Protection, Ottawa, Ontario, K1A 0H3, (819) 953-1656 or (819) 953-1654

PURPOSE:
A national data base to provide historical trend information on 5 common air pollutants on an economic and provincial basis.

ACCESS/FEES/RESTRICTIONS:
Through contact person/None/None

COVERAGE:
National — all provinces and territories

PERIOD OF RECORD/UPDATE FREQUENCY:
Established in 1985, but data goes back to 1970/Uncertain

FORMAT:
IBM-PC — dBase III software

DATA TYPE/PARAMETERS MEASURED:
Chemical/Sulphur dioxide, nitrogen oxides, carbon monoxide, total hydrocarbons and particulate matter

SAMPLING PROCEDURES:
Data calculated based on transportation and fuel consumption data from Statistics Canada and production data from other sources

PROGRAM TYPE:
Monitoring, survey

COMMENTS:

TITLE:
Migratory Game Bird Population Status Data Base

CONTACT:
Kathy Dickson, Environment Canada, Canadian Wildlife Service, Ottawa, Ontario, K1A 0H3, (819) 953-1415

PURPOSE:
To establish trends in population size and monitor long-term patterns in waterfowl abundance

ACCESS/FEES/RESTRICTIONS:
Through contact person/None/Restricted

COVERAGE:
North America; all provinces, territories and states

PERIOD OF RECORD/UPDATE FREQUENCY:
1955 (approximately) to present/Annually

FORMAT:
Digital — dBase III, Quattro software, ASCI files can be produced

DATA TYPE/PARAMETERS MEASURED:
Biological/Species, number of birds, location

SAMPLING PROCEDURES:
Aerial and ground surveys

PROGRAM TYPE:
Monitoring

COMMENTS:

TITLE:
North American Sugar Maple Decline Project

CONTACT:
Bruce Pendrel, Forestry Canada, Maritimes Region, P.O. Box 4000, Fredericton, New Brunswick, E3B 5P7, (506) 452-3500

PURPOSE:
To determine the rate of change, possible causes, and geographic relationships of decline of sugar maple trees

ACCESS/FEES/RESTRICTIONS:
Through contact/No charge/None

COVERAGE:
Plots will be established across eastern North America, from Ontario and Wisconsin to Maine and New Brunswick to measure sugar maple tree condition changes and to inventory possible contributing agents

PERIOD OF RECORD/UPDATE FREQUENCY:
1988 to present/Annually

FORMAT:
Digital – data compiled on computer files
Hard copy – annual reports are available

DATA TYPE/PARAMETERS MEASURED:
Physical/Site description, physiography, weather data, soil characteristics, geological landforms, vegetation coverage
Biological/Tree diameter, tree identification, crown data, tree condtion

SAMPLING PROCEDURES:
Randomly located ground sample plots, air photo interpretation and ground surveys

PROGRAM TYPE:
Research, Survey

COMMENTS:

TITLE:
Nova Scotia Forest Inventory

CONTACT:
Fred Wellings, Nova Scotia Dept. of Lands & Forests, P.O. Box 68, Truro, Nova Scotia, B2N 5B8, (902) 893-5660

PURPOSE:
Land use and forest inventory with emphasis on forest stand

ACCESS/FEES/RESTRICTIONS:
Through contact person/No charge/None

COVERAGE:
Nova Scotia

PERIOD OF RECORD/UPDATE FREQUENCY:
1965 to present/Updated every 10 years

FORMAT:
Hard copy — reports and maps

DATA TYPE/PARAMETERS MEASURED:
Biological/land use, species, tree volumes, forest products

SAMPLING PROCEDURES:
Photo interpretation and randomly located ground sample plots

PROGRAM TYPE:
Monitoring

COMMENTS:

TITLE:
New Brunswick Forest Inventory

CONTACT:
Peter Andrews or Bob Dick, Department of Natural Resources and Energy, P.O. Box 6000, Fredericton, New Brunswick, E3B 5H1, (506) 453-2516

PURPOSE:
To assist in developing forest management plans

ACCESS/FEES/RESTRICTIONS:
Through contact/May be recovery fee/Some data may be restricted

COVERAGE:
New Brunswick

PERIOD OF RECORD/UPDATE FREQUENCY:
1981 to present/Updated annually as required

FORMAT:
Digital — Arc Info GIS

DATA TYPE/PARAMETERS MEASURED:
Biological/Species, age class

SAMPLING PROCEDURES:
Air photo interpretation and ground surveys

PROGRAM TYPE:
Monitoring

COMMENTS:

TITLE:
Prince Edward Island Forest Inventory

CONTACT:
W.M. Glen, Department of Energy & Forestry, P.O. Box 2000, Charlottetown, P.E.I., C1A 7N8, (902) 368-4700

PURPOSE:
Land use and forest inventory with emphasis on forest stand

ACCESS/FEES/RESTRICTIONS:
Through contact person/May be cost of media/None

COVERAGE:
Province of P.E.I.

PERIOD OF RECORD/UPDATE FREQUENCY:
Major update every ten years, minor update every three years, silvicultural activities annual update

FORMAT:
Various — hard copy maps 1980

DATA TYPE/PARAMETERS MEASURED:
Biological/Land use, forest species, tree volumes, forest products, associated field plots include chemical soil analysis

SAMPLING PROCEDURES:
Photo interpretation and randomly located ground sample plots, silvicultural treatments from field assessments

PROGRAM TYPE:
Monitoring

COMMENTS:

TITLE:
Prince Edward Island Permanent Forest Sample Plot

CONTACT:
W.M. Glen, Department of Energy & Forestry, P.O. Box 2000, Charlottetown, P.E.I., C1A 7N8, (902) 368-4700

PURPOSE:
To monitor forest growth.

ACCESS/FEES/RESTRICTIONS:
Through contact person/May be cost of media/None

COVERAGE:
350 permanent plots across Prince Edward Island

PERIOD OF RECORD/UPDATE FREQUENCY:
1974 to present/each plot updated every 5 years

FORMAT:
Digital - Foxpro
Hard copy reports

DATA TYPE/PARAMETERS MEASURED:
Biological/tree height and diameter
Chemical/soil analysis

SAMPLING PROCEDURES:
Field surveys, various silviculture treatments

PROGRAM TYPE:
Monitoring

COMMENTS:

EXCLUDED INFORMATION (Updated 1991)*

Ref. NO.	*TITLE*
A1	*Water Rights Management System*
A2	*Water Related Issues Data Base*
A3	*COGLA – MUD*
A4	*Water Quality Data Base*
A5	*Operation Haglin*
A6	*Annapolis River and Estuary*
A7	*Levels of Organochlorine Contaminants – Cormorants Eggs and Herring Gull*
A8	*Site Classification Manual: Forest Site Types of Nfld.*
A9	*Census of Population and Housing*
A10	*Field Records – University of Prince Edward Island*
A11	*1980 Forest Inventory*
A12	*Pesticides Information System*
A13	*Hydrodynamic Simulations of Selected Inlets*
A14	*Trends*
A15	*Industrial Waste Generators*
A16	*ARPAC (Atlantic Region Pesticides Advisory Committee)*
A17	*Company Reported Environmental Data*
A18	*RIPS (Regional Inventory of Pollution Sources)*
A19	*Physiographic Data for Gauge Basins*
A20	*Base Flow Index*
A21	*Water Quality and Quantity in the Shubenacadie Headwaters*
A22	*PCB Inventory System*
A23	*NIMWWS (National Inventory of Municipal Waterworks and Wastewater Systems) - MUNDAT*
A24	*Computerized Bibliography of Fate and Effects of Petroleum Hydrocarbons in Aquatic Environments*
A25	*Watershed Inventory Project – Prince Edward Island*
A26	*St. Croix Integrated Studies Pilot Project*
A27	*Background Levels of Hydrocarbon in Water and Sediments*
A28	*WATDOC (Water Resources Document Reference Centre)*
A29	*Pesticide Research Information System*
A30	*Project Information System – DFO Referrals*
A31	*Integrated Fish Habitat Management Data Base (I-FISH)*
A32	*Sable Island Beach Bird Survey*
A33	*Summary of Pesticide Use from Pest Control Operators*
A34	*Monitoring Data – Seatech Ltd.*
A35	*Well Log Data Base Management System*
A36	*Forcyte (Forest) – Trend Evaluation*
A37	*Research Set Detail Data (SDET)*
A38	*Inventory of Fish Diseases in Freshwater Fish in Nfld. and Labrador*
A39	*Coastal Resources Mapping*
A40	*Petroleum Management*
A41	*Canadian Wildlife Service Seabird Colony Registry*
A42	*Wildlife Habitats – Other*
A43	*Wildlife Habitats – Wetlands*

*EXCLUDED INFORMATION**

Ref. NO.	*TITLE*
A44	*Organochlorine Trends in Woodcook Tissue*
A45	*National Analysis of Trends in Emergencies Systems (NATES)*
A46	*Ambient*
A47	*Trans-Labrador Highway Environmental Study*
A48	*Environmental Information – Ecology Action Centre*
A49	*State of Environment Information System*
A50	*Census of Agriculture*
A51	*Inventory of Wastewater Treatment Plants – Nova Scotia*
A52	*Wastewater Flow Analysis System*
A53	*CCINFOLine*
A54	*CCINFODisc*
A55	*Municipal Water Use Data Base*
A56	*Industrial Water Use Data Base*
A57	*Regulatory Information on Pesticide Products (RIPP)*
A58	*Critical Flood Levels in the Saint John River Basin*
A59	*NUDAT*
A60	*Fisheries and Habitat Management Branch – DFO*
A61	*Economics Branch – DFC*
A62	*Lead in Gasoline*
A63	*Pesticide Spray Control System*
A64	*International Registrar of Potentially Toxic Chemicals*
A65	*Petroleum Storage Applications*
A66	*Fresh Water Users – Nova Scotia*
A67	*Public Use Data Base*
A68	*Sulphur Content in Liquid Fuels*
A69	*Chemical Profile Data Base – Schedule II List II Transportation of Dangerous Goods (CHEMPROF)*
A70	*Identification & Verification of Closed or Abandoned Land Disposal Sites in the Atlantic Provinces*
A71	*Non-Hazardous Solid Waste Incinerators at Federal Establishments in the Atlantic Provinces*
A72	*CCME National Inventory of Environmental Research and Development Projects*
A73	*Fuel Additives Data Base*
A74	*AQUA SITE*
A75	*N.B. Maps*
A76	*Nova Scotia Stranding Network*

**profiles provided upon request*